

EVIDENCE FROM AYURVEDA, SIDDHA AND HOMOEOPATHY SYSTEMS OF MEDICINE IN PREVENTION AND TREATMENT OF COVID 19

The world continues to be in the grip of the pandemic even 18 months after the new virus first emerged in China in December 2019. The devastating second wave of the pandemic has been spreading like wildfire over the last few months across many parts of the world. In April and May 2021, the world has added about 4.2 crore new covid 19 positive cases and more than 7.6 lakh additional covid 19 related deaths at a daily average of about 6.88 lakh cases and about 12,500 deaths. Unfortunately, India was the largest contributor to this tally, recording 1.6 crore new cases and 1.82 lakh new covid 19 related deaths. (<https://www.worldometers.info/coronavirus/>)

The peak of the second wave seems to be over as both the daily new cases and fatalities are coming down. However, both numbers are still very high and we cannot drop our vigil. This second wave of infection has taken an extremely heavy toll on the nation with the cumulative tally of covid 19 cases increasing by 130 percent from 1,23,02,110 cases on the 1st of April to 2,83,06,883 on the 1st of June. During this period, covid 19 related deaths increased by 110 percent from 1,64,577 to 3,46,590. Our health care system was highly stressed during this period and many had to succumb due to inadequate health support, as can be seen from multiple media reports.

The infection and fatality figures still continue to remain too high. More importantly, domain experts are warning of a third wave by September – October this year. Apart from the direct health impacts, the huge social and economic costs for a major portion of the population, with the marginalised sections being worst affected has also taken a heavy toll and hence we cannot afford frequent repetition of lockdown like restrictions.

Another area of concern is the ineffectiveness of some of the treatments attempted and also severe side effects in some cases. With the world lacking in prior experience in dealing with this kind of pandemic, it is but natural to have tried out various unproved treatment options. Many nations had permitted the use of licensed medicines for indications that have not been approved by a national regulatory authority and are considered as “off-label” use in emergencies. (<https://www.who.int/news-room/commentaries/detail/off-label-use-of-medicines-for-covid-19>) Unfortunately, many of these medicines proved ineffective in containing the pandemic and in some cases, actually resulted in significant side effects.

Solidarity Trial was an international clinical trial to help find an effective treatment for COVID-19, launched by the World Health Organisation and partners and was one of the largest international randomised trials for COVID-19 treatments, enrolling almost 12 000 patients in 500 hospital sites in over 30 countries. Interim results of the Solidarity Trial,

published on 15 October 2020 found that all 4 treatments evaluated (remdesivir, hydroxychloroquine, lopinavir/ritonavir and interferon) had little or no effect on overall mortality, initiation of ventilation and duration of hospital stay in hospitalised patients. (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/solidarity-clinical-trial-for-covid-19-treatments>) Another published study underlined the frequent inappropriate use of antibiotics in COVID-19 patients had entailed an increased risk of adverse reactions including antibiotic resistance in humans. (<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0251340>).

Together, we, the governments, the health sector and the people, need to bring Covid 19 under control at the earliest. We need to explore **ALL** available options to the best of their capacities. Unfortunately, Covid management in our country is predominantly handled by one system of healthcare and it is often projected as the only option available, despite the Ministry of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy), Government of India being proactive in bringing out various advisories guiding AYUSH sector in mitigating Covid 19.

The Forum for Health Justice, hereinafter referred to as FHJ is a collective of concerned citizens including health care personal from different streams, media persons, social activists and others. The FHJ salutes the healthcare personal belonging to modern medicine stream for their courage, commitment and dedication in dealing with the pandemic. However, FHJ would like to point out that the AYUSH systems of healthcare have the knowledge, experience, human power and infrastructure to play a significant role in managing the present health emergency as well as for possible future health emergencies.

Based on available published and unpublished studies and empirical evidences, the FHJ is of firm conviction that if healthcare protocols of different AYUSH systems are followed by a significant number of people, the rate of infection and the percentage of covid 19 positive people requiring hospitalisation can be reduced significantly and the stress on the healthcare infrastructure can be reduced considerably, if not eliminated altogether. For covid 19 positive cases that are asymptomatic or are having mild to moderate symptoms, treatment in any of these systems can be applied at home, at Domiciliary Care Centres and at First Line Treatment Centres. Experience shows that with the AYUSH systems, the percentage of people requiring tertiary care is very low. Add on Ayurvedic medicines for patients under tertiary care, especially for those with reduced oxygen levels have proved to be very effective, enhancing hope that many more lives can be saved.

In the following sections, we try to bring out the possibilities of various AYUSH systems based on published and unpublished studies. Significant data in the form of published

and unpublished reports are already available, highlighting the efficacy and effectiveness of AYUSH systems in managing the pandemic. Five Randomised controlled trials, validating efficacy of Ayurveda and Siddha interventions on Covid 19 have been published in peer reviewed journals. Results of many Randomised Clinical Trials (RCTs) registered in the Clinical Trial Registry of India (CTRI), population based prophylactic studies and observational studies in Homoeopathy have been presented at an International Scientific Convention organised by the Central Council for Research in Homoeopathy under the Ministry of AYUSH, Government of India in April 2021. Manuscripts of the study reports are under active process of publication in peer reviewed journals.

More than 15 pre clinical studies including cell lines, animal models and molecular docking have extensively validated efficacy of Ayurveda and Siddha formulations on covid 19. Many of these are being published in reputed peer reviewed journals. Three extensive clinical trials (retrospective control trail/community based intervention studies) are underway. Case reports on Ayurvedic treatment of even severe category covid 19 patients are published in peer reviewed journals.

Observational clinical studies were conducted as early as April 2020 in India in hospital settings (<https://www.thieme-connect.de/products/ejournals/html/10.1055/s-0040-1718584>) and in cluster outbreaks of the disease in Hong Kong <https://www.thieme-connect.de/products/ejournals/html/10.1055/s-0040-1710545>, which helped to identify indicated homeopathic remedies based on the clinical characteristics of COVID-19 patients. The results indicated an early recovery in those who took Homoeopathy. Worldwide data collection on COVID 19 symptomatology in patients who took Homoeopathy was conducted by the international homeopathic medical society *Liga Medicorum Homoeopathica Internationalis* <https://search.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/en/covidwho-1006419>. The potential role of Homoeopathy in Covid 19 Pneumonia <https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0040-1721063#info> was also emphasised owing to prior experiences in treating viral pneumonias .

HIGHLIGHTS OF EVIDENCE BASE OF AYURVEDA IN COVID 19

According to the World health organisation, almost 80% of the population in Asia, Africa and Latin America depend on traditional medicine as primary healthcare. When it comes to Covid-19, it is impossible for us to not utilise the full potential of these knowledge systems.

Our country is blessed with Ayurveda, a system of traditional medicine with rich literature like Charaka Samhitha and Susruta Samhitha dating back to more than 2500

years. Charaka Samhitha, one of the Ayurveda classics, has voluminous details on epidemics. The chapter “Janapadhoumsa” is dedicated exclusively to epidemics that arise as a result of undesirable life style and handling of Mother Nature. The text discusses the relationship between exploitation of nature, pollution and public health hazards. Along with its strong socio-philosophical references, it has also mentioned treatment protocols for emergency pandemic situations. Several recent studies on Ayurvedic formulations and its efficacy in managing epidemics such as Dengue, Malaria, Chikungunya substantiate the significance of this system.

Considering Ayurveda pathogenesis and systemic involvement and adhering to the policy of using local biodiversity, AYUSH has formulated a preventative measure known as AYUSH kwath. Phyto-chemical analysis and certain pre-clinical studies done with this drug pointed to it's potential as an immune modulator, antioxidant, antiviral and anti-inflammatory. Pilot study done at quarantine centres of Rajasthan proved primary efficacy of AYUSH kwath as a potential prophylaxis.

Soon after, the AYUSH department came up with treatment protocols for symptomatic, mild and moderate covid 19 positive cases. The apex institute with Ayurveda, AIIA, started its covid care centre and it has successfully treated significant number of covid 19 patients. The treatment protocol included AYUSH drugs, indigenous food, Yoga, Marma, Psychotherapy etc. Patients reported overall feeling of wellness on completion of treatment. No casualty was reported from this centre.

<https://www.financialexpress.com/lifestyle/health/delhi-institute-cures-covid-19-patients-with-ayurvedic-treatment-protocol-records-zero-deaths/2038007/>

Article in the international Journal “frontiers in Pharmacology” published online in March 2021, discusses the potential of various herbs and formulations under Ayurveda, Unani and Siddha systems in treating SARS-CoV-2. The report concludes that “Indian Traditional Medicines have a wide potential for being used in these tough times either for prophylaxis or as adjuvant, owing to their longstanding use in community, ancient references and scientific evidence about their safety and clinical efficacy.” The article further expects that “the results of these clinical studies will be disseminated soon at the public platform so that the policymakers from the AYUSH systems of medicines may reframe their policies for public health and provide information to the global scientific community, which could form a platform for collaborative studies at the national and global levels.” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7962606/>

Article published in ‘Indian Journal of Clinical Biochemistry’ in August 2020, citing data from Clinical Trial Registry of India (CTRI) shows that 125 clinical trials were being undertaken by AYUSH systems against 64 by Allopathic systems. The report says “there is a good progress made regarding AYUSH clinical trials however a similar

progress is expected for allopathic interventions".

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7416656/>

An important study published in the peer reviewed journal JMIR Publications (November 2020) validated usage of AYUSH interventions during covid 19 for 7 lakh individual and their self reported experience through AYUSH Sanjeevani App. It concluded as " Data from 723,459 respondents were used for the analysis, among whom 616,295 (85.2%) reported that they had been using AYUSH measures for maintenance of health during the COVID-19 pandemic. Among these 616,295 users, 553,801 (89.8%) either strongly or moderately agreed to have benefitted from AYUSH measures". Ayurveda and homeopathic measures and interventions were the most preferred by the respondents across India. One of the significant findings of the study is that the chance of covid 19 positive cases becoming symptomatic was significantly higher for those not using AYUSH measures, in comparison with those using AYUSH measures. (odds ratio 4.01, 95% CI 3.61-4.59). The study also reveals that using AYUSH measures for longer duration reduces the chance of testing positive for covid 19.

<https://xmed.jmir.org/2021/2/e25703>

The report on AMRUTHAM project of Ayurveda department of Government of Kerala for the period from 21-05-2020 to 20-07-2020, submitted to the government in September 2020 was highly promising. As per the report, 101218 people out of a total of 389185 quarantined people between 21-05-2020 and 08-07-2020 were provided care under AMRUTHAM project. Of these, 347(0.343%) tested positive for covid 19. Among those who were not administered these medicines, 1.62% turned positive (4737 / 293051). Out of 577 positive cases reported among quarantined people under AMRUTHAM project up to 20-07-2020, most (409) were asymptomatic and others had mild to moderate symptoms. Among the positive cases, 111 people had co-morbidities. Most of the patients recovered in 2-3 days and the rest too were cured during the course of treatment. No side effects were observed.

All India Institute of Ayurveda, Delhi is validating Ayurveda clinical efficacy even for hypoxic/ severe category patients. Ayurveda hypoxia case series paper published at peer reviewed journals on severe category patients are highly promising. Case study of a patient in Maharashtra under oxygen support with SPO2 80% and CRP 98.70, who voluntarily opted for Ayurvedic medicine showed significantly improved oxygen levels from day two onwards (SPO2 95-98%). Oxygen support was fully withdrawn in four days. <https://www.sciencedirect.com/science/article/pii/S0975947620300966>.

Another paper being published in Journal of Ayurveda and Integrative Medicine discusses four similar case studies. Out of these, three persons recovered fully while

the fourth patient, an aged woman, whose medication was discontinued more than once, sadly succumbed.

https://www.sciencedirect.com/science/article/pii/S0975947621000735?dgcid=raven_sd_aip_em ail . Highly encouraging outcome has been reported by many of Ayurvedic practitioners with respect to hypoxia cases.

Case study of high-risk case of Covid 19, a 55 year old man at Delhi with multiple co-morbidities on integrative therapy based on Yoga and Ayurveda along with SoC, was highly successful. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7903378/>

Case study of a “severe Covid 19 patient with all predictors suggestive of a bad prognosis including IL-6, D-Dimer, Ferritin and CRP in addition to 18/25 Chest Severity Score. Initially treated under ICU care at a tertiary care Covid hospital for about 14days, the patient was intervened with Ayurveda on his own insistence seeing the unsatisfactory improvements. Ayurveda intervention for 19 days along with standard ICU care resulted in complete clinical recovery of the patient besides the correction of biomarker levels.”

<https://www.sciencedirect.com/science/article/pii/S0975947621000425>

The Ministry of AYUSH-Council of Scientific and Industrial Research (CSIR) Collaboration has recently completed a robust multi-centre clinical trial to evaluate the safety and efficacy of AYUSH 64 in the management of mild to moderate Covid-19 patients. The result is very encouraging and the ministry has recommended its use in asymptomatic, mild and moderate Covid 19 cases.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1714815>

A prospective clinical study published in The Journal of Ayurveda and Integrative Medicine concludes that “ Addition of *Dasamoolkaduthrayam Kashaya* and *Guluchyadi Kwatham* to SoC appeared to accelerate recovery of patients hospitalized for COVID 19 infection, in terms of reduction of symptoms and duration of hospital stay.”

<https://www.sciencedirect.com/science/article/pii/S097594762030098X>

Links to some other reports on Randomised Control Trials on Ayurveda are shared below

Randomised open label parallel group pilot study, Lucknow, Uthar Pradesh with 120 participants - <https://www.sciencedirect.com/science/article/pii/S0975947620301431>

Randomized placebo-controlled pilot clinical trial on the efficacy of Ayurvedic treatment regime on COVID-19 positive patients

<https://www.sciencedirect.com/science/article/pii/S0944711321000362>

A randomized and comparative study to assess safety and efficacy of supplemental treatment of a herbal formulation - *Aayudh Advance* comprising essential oils in patients with Covid-19

<https://www.sciencedirect.com/science/article/pii/S2451865421000569>

Chyawanprash for the prevention of COVID-19 infection among healthcare workers: A Randomized Controlled Trial

<https://www.medrxiv.org/content/10.1101/2021.02.17.21251899v1.full>

Sars-cov-2 host entry and replication inhibitors from Indian ginseng: an *in-silico* approach <https://pubmed.ncbi.nlm.nih.gov/32568012/>

Network pharmacology of AYUSH recommended immune-boosting medicinal plants against Covid-19 <https://www.sciencedirect.com/science/article/pii/S0975947620301078>

HIGHLIGHTS OF EVIDENCE IN SIDDHA IN TREATING COVID 19:

Siddha medical system has its origin in South India and has Tamil literature base. Siddha medical system has adequate evidence base in dealing with *Dengue* and *Chikungunya* epidemics in recent times. "Nilavembu Kudineer(NVK) " and "Kabasura Kudineer (KBK)" two of the poly herbal decoctions mentioned in the Siddha classical text is being repurposed and is widely used as a prophylactic measure. The efficacy of Nilavembu Kudineer is being validated and being published in scientific journals.

In silico molecular docking study, robust pre clinical and clinical studies further provided evidence for efficacy and safe usage of KBK and found few phyto components in KSK to be potent against SARS-CoV-2 spike proteins.

<https://www.sciencedirect.com/science/article/pii/S0975947620300243>.

Few robust RCT's were also conducted that showed the superiority of Siddha drugs in clinical management of Covid 19 when used as an adjuvant to standard care. An open label two arm RCT, evaluated the additional benefits of Siddha drugs to standard care in mild and moderate cases of Covid 19 , where the Siddha add on group showed accelerated recovery for the patients.

[\(https://pubmed.ncbi.nlm.nih.gov/33519133/\)](https://pubmed.ncbi.nlm.nih.gov/33519133/)

A preprint of the abstract of a triple arm double blinded RCT evaluates the comparative efficacy of NVK and KSK as opposed to the placebo arm, in the management of mild to moderate COVID-19 disease. (<https://www.researchsquare.com/article/rs-604520/v1>)

The National Institute of Siddha has submitted case documents on treatment of more than 4000 covid patients. Not even a single mortality was reported. The report is being submitted to the AYUSH ministry from Siddha covid centre Vellore district. Increased demand for Siddha care has prompted the Government of Tamil Nadu to open more Siddha care centres across the state. Ayurveda and Siddha have also been able to widen its evidence base through the engagements with covid 19.

ROLE OF HOMOEOPATHY IN MITIGATING COVID 19 THROUGH MASS PROPHYLAXIS AND TREATMENT

Brief History: Homoeopathy & Epidemics

Historically, Homeopathy had a significant role in the control and eradication of infectious epidemic diseases, particularly before the advent of modern sanitation, vaccinations and antibiotics. Homoeopathy has shown potential benefit in treating various diseases of epidemic proportions such as Swine flu, Infuenza-like illnesses, Acute encephalitis syndrome, hemorrhagic dengue fever, diarrhoeal disorders and Chikungunya with already existing and approved drugs. Homoeopathy has stood the test of time and has served to alleviate the sufferings in many great epidemics that have plagued the world with successful containment of Leptospirosis in Cuba and Japanese Encephalitis in Andhra Pradesh, India being few testimonials to that.

The approach to prevention in Homoeopathy is two-pronged. Homoeoprophylaxis or, prevention through Homoeopathy, can either be met through Genus Epidemicus, which means a remedy which is found to be curative in the majority of cases of the same disease is also the most likely preventive for that disease; or through nosodes (medicine prepared from biological material of a disease including infectious agents). The former is identified through observation of several cases of an epidemic disease, and analyzing the symptomatology of those cases for the most indicated medicine. This medicine is considered to be the preventive medicine for the ongoing epidemic of that disease.

While proposing to use Homoeopathy for preventive and treatment purposes in epidemics, we are not dealing with unregistered or experimental interventions except with regard to nosode development.

Directives for Homoeopathy from Ministry of AYUSH during COVID 19

- a. An advisory issued by the Ministry of AYUSH in the initial stage of this outbreak in India talked of the role of AYUSH modalities in enhancing the immunity of a person to fight Coronavirus, and suggested some remedies that could be taken by the people while following other general measures of prevention such as maintaining social distancing, frequent handwashing, etc., as prescribed by the World Health Organisation (WHO). Homoeopathic medicine: Arsenic album in the 30th potency, one dose in an empty stomach, to be taken every day for 3 days, followed by a repeat after a month was a part of this advisory .
- b. In the advisory dated 6th March 2020, measures to fight COVID 19 were brought out for the state health/Ayush Secretaries which reiterated the same. This was widely circulated and many state governments, through their AYUSH departments, eventually issued guidelines to distribute Arsenic album 30 for prevention in all State Primary Healthcare Centres. But how far this could be, in turn, implemented is still a matter of evaluation. However, 7 states of India – Kerala, Manipur, Goa, Karnataka, Madhya Pradesh, Rajasthan and Gujarat –have distributed preventive medicine Arsenic album 30 to its people who use Homoeopathy for routine ailments, as well as to those who showed up at homoeopathy units only for this purpose. The advisory also mentions the following :
'In one of the studies Arsenic album as one of the constituents in a formulation affected HT29 cells and human macrophages. Also, it showed NF-KB hyperactivity (reduced expression of reporter gene GFP in transfected HT29 cell), ↓TNF-a release in macrophages. More over Arsenic album is a common prescription in the cases of respiratory infections in day to day practice'
- c. Telemedicine as well as general guidelines for homoeopathic practitioners were subsequently brought out by the Ministry in April 2020.
- d. Subsequent to the publication of Guidelines for AYUSH clinical studies on Covid 19 and gazette notification(21st April 2020) on conducting ethical research in AYUSH systems, the Central Council for Research in Homoeopathy an autonomous body under the Ministry of Ayush conducted Clinical Trial Registry of India(CTRI) registered research studies.

National status of Homoeopathy Research in COVID 19

1. Population based prophylactic studies

- a. To validate *Arsenic album* 30C as prophylactic for COVID-19, the Central Council for Research in Homoeopathy conducted 02 CTRI registered prophylactic studies. One multicentric Randomised controlled Trial and one cohort study to assess effectiveness of *Arsenicum album* on incidence of COVID -19 were completed. The cohort study was

undertaken at 11 containment zones at Delhi, whereas RCT was conducted in 27 containment zones of 07 cities (Mumbai, Chennai, Delhi, Kolkata, Surat, Machilipatnam, and Hyderabad) of India. In RCT, analysis was done for a total enrolled 32301 population [Intervention(22753); observation (9548)] and in cohort study analysis of the 10180 participants [Homoeopathy intervention(n= 6590) or Non-intervention (n= 3590) cohort] were done. The analysis shows that only 0.50% developed Covid like illness as per standard definition of COVID 19 in the intervention group and 3.03% in the control group. Overall protection rate was 80% against COVID-19 infection.

- b. Herculean efforts were made by CCRH for population based data collection studies where *Arsenicum album 30C* was distributed to populations at a large scale in 34 districts of 13 states across India through its 23 research centres and in collaboration with more than 200 homoeopathic medical colleges wherein about 62 lakh population was distributed the medicine and data of 669726 population have been analysed interimly to see that 99.3% did not develop any COVID positivity. The study validates the concept of homoeopathic *genus epidemicus* yet again and recommends homoeopathy as a viable, safe, inexpensive and effective approach to manage any new or unknown communicable diseases in future.
- c. Another prophylactic activity was conducted in the Delhi Prisons of Tihar, Rohini and Mandoli wherein 24,215 prison inmates and 3851 prison staff including family members were distributed the *Arsenicum album 30C* inside the prison barracks for three months (phases) with three weekly follow ups done for the 21 day period post intake of the prophylactic. The number of inmates who tested COVID positive were 31(0.22%), 17(0.12%) and 0 and those who developed COVID like symptoms were 1041(7.54%), 1421(10.35%) and 524(3.56%) respectively during the three phases of distribution and follow ups. Amongst the prison staff including their family 06 (0.16 %) tested COVID positive and 23 (0.60%) developed COVID like symptoms at the end of follow ups. The prison COVID incidence when compared with the incidence of state of Delhi showed a declining trend.
- d. *Arsenicum album 30C* was distributed amongst Maharashtra Police personnel and post prophylactic analysis data of the same showed that only 5%(n=61)of the force who took the medicine became COVID positive as compared to 13.3% who took other prophylactic interventions (HCQ, vitamin supplements etc.)
- e. During the month of March 2020 when COVID 19 was spreading as rapidly across the State of Kerala, a study was conducted in

Pathanamthitta district by District Medical Officer, Department of Ayush, regarding the immunogenicity of *Arsenicum album*30C. A random group of subjects was selected based on stress index. Selected subjects were then administered with the medicine. Immuno markers were measured before and after administration of AA30 and was found that there is an upregulation in the immune markers. Preliminary evidence in showing the action of AA30 in providing humoral immunity was obtained which warrants further studies in a clinical trial mode.

2. Treatment Trials

- a. Clinical trials on Homoeopathy as adjuvant to standard treatment were conducted in a Randomised Controlled Trial (RCT) design at modern tertiary care hospitals in Pune like Ruby Hall Clinic, KEM Hospital and YCM Hospital Pune for treatment of COVID-19. The analysed data demonstrated clinical superiority of treatment arm over placebo arm in relevant parameters like reduction in pro inflammatory markers, mortality rate and length of hospital stay.
- b. In a study at Covid Health Care Centre at New Delhi, mild and moderate cases were given homoeopathy as add on to standard treatment where 28 homoeopathic medicines were prescribed with varying degrees of improvement.
- c. In an RCT conducted at tertiary care dedicated Covid Hospital (Chirayu Hospital), Bhopal, about 300 mild/moderate/severe Covid 19 patients were given individualised homoeopathy as add on to standard treatment. The homoeopathy add on group showed a two day early recovery than the placebo add on group.
- d. Another RCT was conducted at National Cancer Institute, Jhajjar (AIIMS, Delhi branch) wherein from the study sample of 147 patients, 72 were enrolled in the add on homoeopathy (AH) arm and 75 in the standard treatment (ST) arm. The primary outcome measure was time to convert RT-PCR Covid 19 status to negative. The study showed positive and directional results in favor of AH arm. Mean days of seroconversion of RT PCR was 9.13 in AH arm and 12.34 in ST arm. Total mortality was 7 in AH and 13 in ST arms respectively.
- e. Retrospective data analysis of about 2852 patients who have taken add on Homoeopathic interventions in dedicated Covid hospitals in Gujarat through

State Department of Ayush showed a time to clinical improvement as 5 days with 80% discharged by 7th day . The data highlighted that Adjuvant Homoeopathy has promising response with relief of clinical symptoms, and less progression into severity in risk group of elderly with comorbidities. There were no reported adverse effects of taking the adjuvant Homoeopathy, making it beneficial for integrated use for management of COVID-19 patients.

The various research studies conducted during the COVID 19 pandemic has shown positive and directional role of Homoeopathy when used as a mass prophylactic or as a treatment modality. The Covid pandemic was a testing time globally and nationally putting to test the disaster preparedness of the nation as well as overburdening its healthcare infrastructure. The role of AYUSH interventions as well as workforce have risen to the need of the hour to bring to the forefront the evidence for alternative solutions in a medical scenario with no cure in place for the SARS CoV2 with impressive leap in AYUSH we can together understand the extent of the COVID-19 pandemic, which in turn will allow local, national, and international decision-makers to respond collectively to the pandemic. The many data available on homoeopathic research brings evidence to the forefront to show the utility of homoeopathic interventions in managing pandemics like the current Covid 19. Homoeopathy will play a key role in mitigating Covid 19 if integrated in an interdisciplinary manner to play a meaningful role in public health delivery of the nation.

We feel that given the gravity of the situation and the impending waves of the pandemic which everyone fears will be more devastating, the government should not limit itself to any system of medicine but consider exploring and promoting all possible modes of enquiry, approach and research for finding effective and long term solutions. This is especially so in a crisis situation like this when no ready and fool proof solutions are in sight. Such exceptional contexts, we feel makes it all the more urgent and necessary to explore the well-established medical knowledge of AYUSH systems, as well as other traditional and alternative systems of medicines.

Based on the above findings, studies and discussions, Forum for Health Justice would like to appeal to the governments to take immediate steps to incorporate AYUSH systems in Covid 19 care at all stages to the maximum extent possible. Such an initiative, as evidences above suggest, can significantly reduce the rate of infection, and positivity rate, reduce percentage of people developing severe symptoms apart from

saving many more lives. In this context, we request you to consider the following measures:

1. The infrastructural and human resources of AYUSH systems be fully and effectively utilised for Covid 19 care under the respective health care system in a stand-alone mode and in integration with other systems
2. That dedicated DCCs and CFLTCs be set up with different and integrated AYUSH systems to facilitate in-depth studies and analysis. Provide AYUSH care support at other DCCs and CFLTCs along with SoC and permit people to adopt systems of their choice.
3. Facilitate the integration of AYUSH systems with allopathic medicines/ treatment at the tertiary care hospitals, as case studies and evidences above suggest that it will help save more lives.
4. Promote AYUSH guideline based diet, lifestyle, mind and body exercises etc at covid care centres.
5. The importance and role of AYUSH health care systems in managing covid 19 be advertised and promoted through different media platforms including the official public relations channels.
6. Provide adequate financial and moral support to encourage scientific documentation and clinical, pre-clinical studies to validate the efficiency of AYUSH systems. It requires access to relevant and necessary data for such studies and arrangements for timely publication of the same.