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For instance, emphasis on avoidance of causative factors and enhancing the immunity against host of infections are characteristics of Ayurveda management. The preventive aspect of Homoeopathy is well known, and historically, Homoeopathy has reportedly been used for prevention during the epidemics of Cholera, Spanish Influenza, Yellow fever, Scarlet fever, Diphtheria, Typhoid etc. The genus epidemicus (GE) is the remedy found to be most effective for a particular epidemic once data have been gathered from several cases. It was reported that, during recent past GE had been used during various disease outbreak for preventing the spreading of diseases like Chikungunya, Dengue Fever, Japanese Encephalitis and Cholera with good results. As detail accounts of use of homoeopathy in control of epidemics are given in recent publications.

The AYUSH approach to manage the outbreak broadly comprise of:

- i. Preventive and prophylactic
- ii. Symptom management of COVID-19 like illnesses
- iii. Add on Interventions to the conventional care

Based on potential & strength of AYUSH systems supported by evidences for promotion of immunity and help in improving the respiratory symptoms in similar diseases and as per the recommendations from the research councils under Ministry of AYUSH following system wise approach is recommended:

i. Preventive and prophylactic:

Ayurveda:

Samshamani Vati 500 mg. twice a day with warm water for 15 days. The medicine contains aqueous extract of *Tinospora cordifolia*.

Siddha:

Nilavembu Kudineer decoction 60 ml. twice a day for 14 days. The medicine contains aqueous extract of *Andrographis paniculata* & others.

Unani:

Preparation of decoction by boiling Behidana (*Cydonia oblonga*) 3 gm, Unnab (*Zizyphus jujube*) 5 in number. Sapistan (*Cordia myxa*) 9 in number in water. (Boil these in 250 ml water- boil it till it remains half- filter it – keep in a glass bottle and use it lukewarm). The drugs used in the preparation of this decoction have been reported to have

ADVISORY FROM MINISTRY OF AYUSH FOR MEETING THE CHALLENGE
ARISING OUT OF SPREAD OF CORONA VIRUS (COVID-19) IN INDIA

Corona viruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The new Corona virus disease (COVID-19) was first reported from Wuhan, China, on 31 December 2019. 72 countries reported COVID-19 incidence with 90,870 confirmed cases and 3112 deaths as per WHO factsheet as on 03.03.2020. As on 03.03.2020, 05 confirmed cases are reported in India from various parts.

Common signs of infection include fever, cough, myalgia, fatigue and breathing difficulties. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

The function of the immune system is critical in the human response to infectious disease. Viral infections induce oxidative stress and cause damage to airway epithelial cells. A growing body of evidence identifies stress, nutrition and immunity as a cofactor in infectious disease susceptibility and outcomes. The mainstay in management of corona viral infections has been supportive care, nutrition and preventing further progression in the absence of any antiviral agent or vaccine.

During Ebola outbreak in 2014 expert group of WHO has recommended that "it is ethical to offer unproven interventions with as yet unknown efficacy and adverse effects, as potential treatment or prevention" keeping in view no vaccine or anti-virals were available.

Approach of AYUSH systems:

The holistic approach of AYUSH systems of medicine gives focus on prevention through lifestyle modification, dietary management, prophylactic interventions for improving the immunity and simple remedies based on presentations of the symptoms.

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1. Vishasura Kudineer : decoction 60ml twice a day
 2. Kaba Sura Kudineer – decoction 60ml twice a day

Homoeopathy

Medicine mentioned Symptom management of COVID-19 like illnesses" under subhead Homoeopathy can also be given as add on to the conventional care.

All these medicines should be taken in consultation with qualified physicians of respective AYUSH systems.

General preventive measures (already notified):

- i. Observe good personal hygiene.
- ii. Practice frequent hand washing with soap.
- iii. Follow respiratory etiquettes - cover your mouth when coughing or sneezing.
- iv. Avoid close contact with people who are unwell or showing symptoms of illness, such as cough, runny nose etc.
- v. Avoid contact with live animals and consumption of raw/undercooked meats.
- vi. Avoid travel to farms, live animal markets or where animals are slaughtered.
- vii. Wear a mask if you have respiratory symptoms such as cough or runny nose.

In addition, the following AYUSH specific measures may be adopted:

The diet should be fresh, warm, easy to digest, containing whole cereals, seasonal vegetables etc. Frequent sipping of water boiled with Tulsi leaves, crushed ginger, and turmeric would be beneficial. Honey with a pinch of pepper powder is also beneficial in case cough. Cold, frozen and heavy foods may be best avoided. It is always beneficial to avoid direct exposure to cold breeze. Appropriate rest and timely sleep are advisable. The practice of Yogasana and Pranayama under the guidance of qualified Yoga instructor is recommended. Common medicinal plants useful in similar symptoms are Tulsi (*Ocimum sanctum*), Guduchi (*Tinospora cordifolia*), Ginger (*Zingiber officinale*) and Turmeric (*Curcuma longa*)

Antioxidant activity, Immuno-modulatory, antiallergic, smooth muscle relaxant activity and Anti-influenza activity. This decoction may be taken twice a day for 14 days.

Homoeopathy:

Arsenicum album 30, daily once in empty stomach for three days. The dose should be repeated after one month by following the same schedule till Corona virus infections prevalent in the community.

In one of the studies Arsenic album as one of the constituents in a formulation affected HT29 cells and human macrophages. Also, it showed $\downarrow$ NF- κ B hyperactivity (reduced expression of reporter gene GFP in transfected HT29 cells), $\downarrow$ TNF- α release in macrophages. More over Arsenic album is a common prescription in the cases of respiratory infections in day to day practice.

ii. Symptom management of COVID-19 like illnesses

Ayurveda

1. AYUSH-64 : 02 tablets twice a day
2. Agasthya Hareetaki : 05 gm twice a day with warm water
3. Anuthaila/ Sesame oil 02 drops in each nostril daily in the morning

Siddha

1. Nilavembu Kudineer / Kaba Sura Kudineer – decoction 60ml twice a day
2. Adathodai Manapagu – Syrup 10 ml twice a day

Homoeopathy

Various medicine which found to be effective in treating flu like illness are *Arsenicum album*, *Bryonia alba*, *Rhus toxicodendron*, *Belladonna*, *Gelsemium*, *Eupatorium perfoliatum*.

All these medicines should be taken in consultation with qualified physicians of respective AYUSH systems.

iii. Add on Interventions to the conventional care

Ayurveda

1. AYUSH-64 : 02 tablets twice a day
2. Agastya Hareetaki : 05 gm twice a day with warm water

Siddh

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