

23-11-2020

STATE AYURVEDA COVID-19 RESPONSE CELL

THE EVALUATION REPORT ON PUNARJANI

(THE AYURVEDIC CONVALESCENT CARE STRATEGIES FOR
THE POST-COVID INDIVIDUALS IN KERALA)



15-04-2020 to 31-08-2020

DEPARTMENT OF AYUSH
GOVERNMENT OF KERALA



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15-04-2020 to 31-08-2020

SUBMITTED ON
23-11-2020

IMPLEMENTED BY
DEPARTMENT OF INDIAN SYSTEMS OF MEDICINE
AND
NATIONAL AYUSH MISSION

DEPARTMENT OF AYUSH, GOVERNMENT OF KERALA



INTRODUCTION

The honourable Chief Minister of Kerala had convened a video conference among the selected Ayurvedic experts from various fields for devising appropriate Ayurvedic strategies for the management of COVID-19 in the state on 30 March 2020. In the light of the deliberations of the conference, a seven-member task force was constituted for submitting a detailed report recommending the Ayurvedic strategies. Elaborate discussions were carried out on behalf of the task force incorporating the ayurvedic experts from diverse fields of the science and a comprehensive report recommending definite Strategies for the Implementation of *Ayurveda in the Prevention, Mitigation and Rehabilitation of Covid-19* was submitted on 3 April 2020. The report and the subsequent action plan on the basis of the report were endorsed by the government and the *State Ayurveda COVID-19 Response Cell* (SACRC) responsible for the planning and implementation of the strategies came in existence.

Swasthyam intended for strengthening the individual protection against COVID-19 among various classes of the population below the age of 60 considering the intensity of risk to exposure, *Sukhayushyam* intended for the protection of individuals above the age of 60 against COVID-19 attack, *Punarjani* intended for ensuring speedy recovery in convalescent COVID-19 cases and *Niramaya*, the official media platform for the propagation of promotive Ayurvedic health care activities were the four important flagship programmes decided for execution. The department of AYUSH, Government of Kerala, had later extended the approved Ayurvedic strategies for the prevention, mitigation and rehabilitation of COVID-19 in Kerala to individuals under quarantine including the re-immigrants to the state and the project *Amritham* was later rolled out.

The Punarjani project was implemented across the state on 15 April 2020 with the active participation of the Department of Ayurveda Medical Education, Department of Indian Systems of Medicine and National AYUSH Mission. The project has been implemented through the Ayur Raksha Clinics (*ARC*) and Ayur Raksha Task Force (*ARTF*) across the state with massive support from the LSG bodies (*currently, 1206 ARC are presently working across the state covering all the grama panchayats*). The present report is a comprehensive evaluation of the ongoing Punarjani project in the state. The report primarily consists of the following;

1. Basic socio-demographic details of the 4871 post-COVID individuals who had received the approved Ayurvedic Convalescent Care Strategies (ACCS) under the *Punarjani* programme in the state for the period from 15 April 2020 to 31 August 2020.
2. Scientific evaluation of the course of SARS-CoV-2 infection including the symptomatology and complications.
3. Detailed documentation and analysis of the sequelae to SARS-CoV-2 infection.
4. Assessment of the response to the Ayurvedic Convalescent Care Strategies in the sequelae to COVID-19.

METHODOLOGY

The ACCS under *punarjani* mainly comprised of Ayurvedic medicines recommended in the approved Essential Drug List (annexed), modifications in the activities of daily living (ADL), dietary adjustments, support for psychological disturbances and Yoga modalities tailor made to address the individual clinical presentations. Medical officers of the ARC were granted the liberty of prescribing medicines from the Essential Drug List according to the recommended indications after considering the *Prakriti (constitutional aspects)* of the individual under convalescent care and associated clinical conditions. The ACCS was executed by the ARC's operating through the ARTF under the keen supervision of the concerned medical officer of the ARC.

Informed consent regarding the acceptance of ACCS was obtained from the post-COVID individuals under *Punarjani*. The directions regarding the administration of the medicines, activities of daily living and dietary modifications were delivered to the individuals under *Punarjani* care. The data was collected using the pre-structured case record form (CRF) devised by the SACRC. The guidelines for the implementation of the programme and the CRF were in accordance to the approved general guidelines. Daily monitoring regarding the use of ACCS, health status of the individual and the state of the sequelae were closely monitored and recorded at the ARC's through ARTF. Only those individuals who had tested negative for SARS-CoV-2 infection and had successfully completed the mandatory quarantine period were included in the *Punarjani* programme for post-COVID care. The duration of the post-COVID convalescent care under *Punarjani* had been determined as either the duration for the complete recovery of the reported sequelae or a follow up period of 90 days, whichever the later.

Only 4871 individuals reported to have compliance to the ACCS during the period from 15 April 2020 to 31 August 2020 have been included in the current evaluation.

The public health mechanism existing in Ayurveda in the government sector has not so far had a distinct data collection and management system, which is indispensable in the execution of major epidemiological programmes rolled-out by the government. Dedicated human resource and an official framework for the same were also not in place. These lacunae were overcome by the constitution of a devoted district-wise research team under the DISM for the effective implementation of the COVID-19 related research activities on behalf of the SACRC. The district level research group comprising of five members from among the budding research oriented medical officers from the district was constituted as per the orders of the Director, DISM, in all the districts of the state. Preliminary awareness and training programmes regarding the data collection, data processing and management as well as epidemiological methods were organized for the members of the group by the SACRC.

Pre-structured google forms were prepared for the data collection and necessary instructions regarding the collection and consolidation of the data were delivered through video tutorials. The data obtained from the ARC's were directed to the district research group, where the obtained data were thoroughly verified and its reliability assured. The final data thus obtained were directed to the SACRC where the evaluation of *Punarjani* was conducted. The present report is based on a descriptive analysis of the data obtained from the ongoing *Punarjani* project under the SACRC.

(Being an official report of the scientific evaluation of an ongoing government programme, the current document necessarily does not conform to the exact format of a scientific publication. Here the attempt has been made primarily to highlight the results obtained so far along with necessary recommendations on the basis of the findings)

FINDINGS

The major results identified on the scientific analysis of the observed *Punarjani* data are being summarized here. The observations that have helped in arriving at these findings have been presented in the subsequent sections of this report.

1. Among the 4871 post-COVID individuals who were under Punarjani care, majority (67%) were males. This is in confirmation to the acknowledged gender pattern of the SARS-CoV-2 infection.
2. Eighty percent of the entire group belonged to the age group of 15 to 64, confirming the accepted pattern of age distribution among COVID-19 individuals.
3. The percentage of individuals with pre-existing comorbidities reportedly were 18.6%, with diabetes mellitus accounting for 46.2% followed by hypertension (36.7%) in a differential analysis.
4. Out of the 4871 individuals who were under *Punarjani* care, 2384 (48.9%) had been symptomatic during their COVID-19 course. Fever was the most commonly reported symptom (19.9%, 1394) among the individuals, followed by sore throat (12.8%) and cough (10.4). Fatigue/malaise (8.3%), head ache (7.9%), loss of smell (7.8%), loss of taste (7.2%) and muscle aches (5%) were the other symptoms prevalent among the group. Shortness of breath, an alarming feature of COVID-19 was present in 3.6% of the individuals.
5. Regarding the complications that had occurred during the COVID-19 course in the entire group, only 1.75% (85) had reported any serious complications such as Pneumonia and Acute Respiratory Distress Syndrome.
6. Out of the total 4817 individuals, only 15% (728) had previously received Ayurvedic Prophylactic Strategies during their quarantine care prior to being tested positive for the infection. Out of those 728 individuals 60% had been under APS for 6 to 15 days.

7. Out of the 4871 individuals who had been under Punarjani care, any kind of post-COVID sequelae were reported in 30% (1451). Over 40 diverse symptoms were reported among the individuals during their post-COVID period. Half of the symptoms were persistent/reappearing/newly appearing COVID-19 symptoms themselves. Remaining were newly developed symptoms that were not reported as a part of their earlier active SARS-CoV-2 infection.
8. Out of the 1451 individuals reported to have had post-COVID sequelae, 39.1% (567) had fatigue/malaise as the major symptom followed by cough (26.5%), shortness of breath (13.8%), head ache (12.6%) and muscle aches (12.5%). Hair fall was observed in 3.7% (53) individuals.
9. Abdominal discomfort had accounted for 11.9% of the sequelae among the individuals and sore throat/throat discomfort 11.8%. Anxiety like psychological disturbances (6.5%) and Post-Traumatic Stress Disorder (PTSD-1.2%) were also reported. Social stigmatization had also been reported by 6.5% (94) individuals with sequelae.
10. Worsening of the pre-existing or the appearance of new diabetes mellitus was reported among 6.1% (88) individuals having sequelae (1451) and the same was reportedly 3.1% (45) with regard to hypertension.
11. No significant adverse drug reactions (ADR) during the administration of Ayurvedic Medicines under *Punarjani* had been reported
12. Obviously, 93.3% (1354) individuals with COVID-19 sequelae, had reported to have recovered from the symptoms completely within 30 days of administration of the ACCS. Only 14 individuals had reported partial recovery even after the completion of the ACCS.
13. Out of the 1451 symptomatic post-COVID individual who had completed the ACCS, 91.7% (1330) had reportedly experienced physical as well as psychological well beings

besides symptomatic relief. In spite of having fully recovered from their post-COVID health issues, about 7% (107) were reportedly unable to experience any state of well-being. The rest (0.9%) had only partial/no recovery.

14. The post-COVID sequelae characterized by chronic fatigue, deterioration of respiratory function, persistent psychological disturbances and several other long-lasting health issues have been widely reported globally. However, in the present study involving 4871 post-COVID individuals under the Punarjani care, none of these symptoms were reported, nor had there been any worsening of the existing sequelae.

LIMITATIONS

The results and the inferences arrived at have to be comprehended in the light of the limitations being stated below.

1. Rather than being an elaborate systematic research initiative, the current report is in fact the presentation of the summary of a systematic data collection of an ongoing public health programme. Hence the necessary scientific rigor may be found wanting here.
2. Although the data regarding the COVID-19 sequelae presented here are authentic and reliable, owing to the potential recall bias involved the one pertaining to the COVID-19 course of the population observed here appears slightly deficient.

RECOMMENDATIONS

The following recommendations are being made based on the findings as well as identified limitations.

1. In the current scenario where the complex post-COVID sequelae have been growing in alarming proportions and challenging the public health machinery across the world, the findings of the present study provides ample evidences justifying the widespread utilization of Ayurvedic Convalescent Care Strategies (ACCS).

2. Since the post-COVID sequelae presents with multi-system multi-organ manifestations, the potential of various Ayurvedic specialties may be tapped in addressing the same. Multi-specialty Ayurvedic post-COVID Clinics shall be urgently set up at district-level Government Ayurveda Hospitals and Ayurveda Medical Colleges in the Government Sector. Reputed private Ayurvedic institutions/hospitals may also be incorporated to this initiative.
3. Considering the significant cost involved in the sustenance of this programme, necessary financial assistance shall be provided for extending the benefits of *Punarjani* at least to those post-COVID individuals belonging to the low-income strata of the society.
4. On the basis of the findings from the current evaluation, it is recommended that further rigorous epidemiological research using “gold standard methods” be undertaken for throwing greater light into the community level interventions of Ayurveda in the COVID-19 scenario.
5. The findings of the report necessarily demand multicentric trials to evaluate the effectiveness of Ayurvedic Convalescent Care Strategies (ACCS) in post-COVID individuals.
6. The public health mechanism available for the delivery of Ayurveda in Kerala shall be strengthened by coupling data collection and managing facilities. This will ensure effective delivery of Ayurveda during public health emergencies and also will ensure evidence-based researches in the field.

CONCLUSION

In the light of the inspiring preliminary findings reported from the ongoing *Punarjani* care for COVID-19 sequelae in Kerala, it is evident that, the Ayurvedic COVID-19 Convalescent Care Strategies (ACCS) are potent enough to satisfactorily address the diverse and grievous health issues manifesting in COVID-19 recovered individuals. Although the management of SARS-CoV-2 infection, in majority of the individuals, have been one of a shorter duration, it appears that, the campaign against its sequelae is bound to take considerable time and resources. So, the public health machinery in the state needs to be prepared and strengthened for a prolonged war against the devastating menace channelizing even the last straw of resource at disposal. Also, it is high time that, the potentials of Ayurveda in the state be enhanced from a stature of complementary/alternative medical system to an extensive level of being an indispensable component of integrative health care envisaged by the World Health Organisation.

OBSERVATIONS

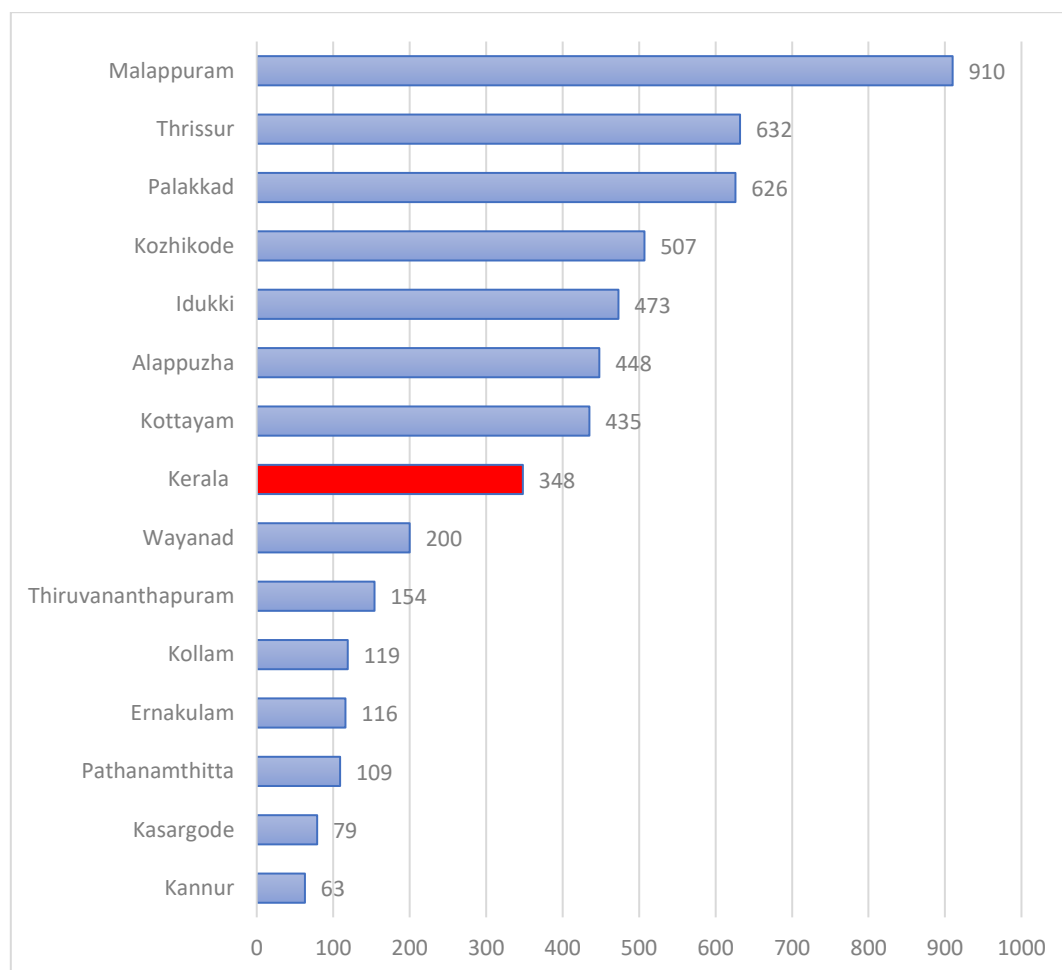


Figure 1: District-wise number of post-COVID-19 individuals who had received Punarjani care during the period from 15 April 2020 to 31 August 2020 (n=4871)

Figure 1 depicts number of post-COVID individuals who had received the ACCS under Punarjani programme across 14 districts of the state. Maximum recipients of the programme were observed in Malappuram (910) followed by Thrissur (632) and Palakkad (626) districts, bettering the state average of 328 by a considerable margin.

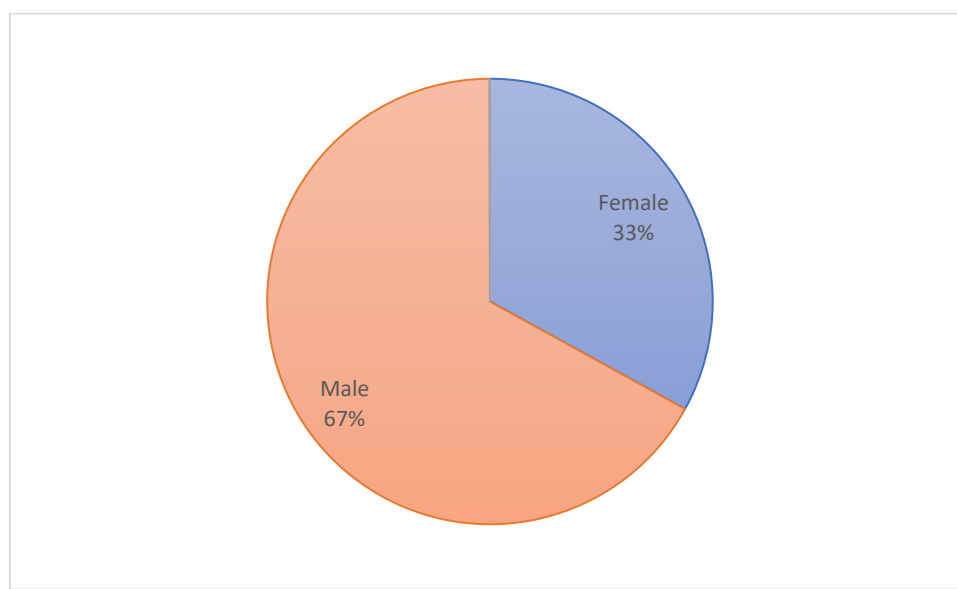


Figure 2: Distribution of gender among the individuals who had received Punarjani care during the period from 15 April 2020 to 31 August 2020 (n=4871)

Figure 2 shows that 67% (3262) of the individuals in the convalescent period of their SARS-CoV-2 infection, who had enrolled in the Punarjani programme for post-covid-19 conditions, were males and 33% (1608) were females. There was one LGBT individual.

Out of the 4871 individuals under Punarjani care, more than 80% belonged to the age group of 15 to 64 (**Table 1**). Individuals above the age of 65 were only 5% and those below the age of 14 were around 10%.

Table 1: Distribution of age among the individuals who had received Punarjani care during the period from 15 April 2020 to 31 August 2020

Age distribution	Number of individuals	Percentage (%)
≤4	125	2.57
5 to 14	354	7.27
15 to 24	566	11.62
25 to 34	1147	23.55
35 to 44	1080	22.17
45 to 54	851	17.47
55 to 64	492	10.10
65 to 74	194	3.98
75 to 84	49	1.01
85+	13	0.27
Total	4871	100

Table 2: Status of comorbidity among the individuals who had received Punarjani care during the period from 15 April 2020 to 31 August 2020

Status of comorbidity	Number of individuals	Percentage (%)
With comorbidity	904	18.56
Without comorbidity	3647	74.87
Data not available	320	6.56
Total	4871	100

Table 2 shows that only 18.56% (904) out of the 4871 individuals under Punarjani care were having some comorbidities. Convincing data regarding 6.56% (320) individuals could not be sourced. The rest were free from any comorbidities when they had been tested positive for the SARS-CoV-2 infection. The group included 98 smokers. Alcohol consumptions was reported in 88 individuals and 39 had reported both the habits. Twenty-nine were pregnant women and 43 were breastfeeding mothers.

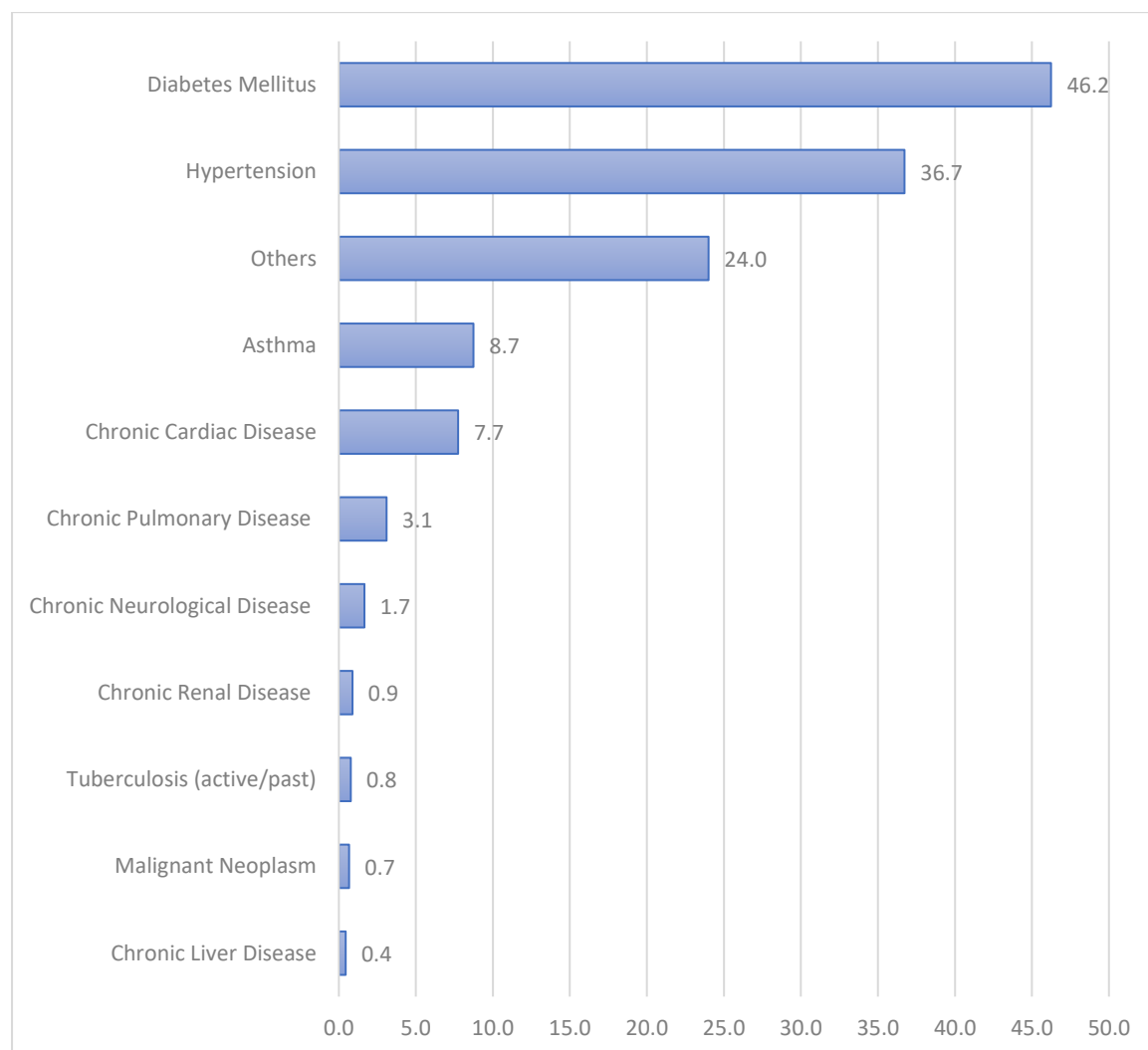


Figure 3: Percentage distribution of comorbidities among the individuals who had received Punarjani care during the period from 15 April 2020 to 31 August 2020 (n=1451)

Diabetes Mellitus (DM) was found to be the single most reported comorbidity among the individuals under Punarjani (**Figure 3**). About 46% (418) of the individuals with reported comorbidities had DM followed by hypertension 36.7% (332). Seventy-nine individuals (8.7%) had asthma, (7.7%) had chronic cardiac and chronic pulmonary disease was reported in (3.1%).

Table 3: Duration of COVID-19 care of the individuals under Punarjani, when they had tested positive for SARS-CoV-2 infection.

Duration of COVID-19 care	Number of Individuals	Percentage (%)
≤5 days	288	6.5
6 to 10 days	2425	54.7
11 to 15 days	1136	25.6
16 to 20 days	318	7.2
21+	263	5.9
Total	4430	100

Table 3 shows the duration of the COVID-19 care of the individual under Punarjani, when they had tested positive for SARS-CoV-2 infection. Up to 80% (3561) of the individuals had remained in the COVID-19 care facility for a duration of 6 to 15 days until they were tested negative for the infection. Only about 5% (263) of the individuals had to stay under COVID-19 care for over 21 days. Six percent (288) of the individuals tested negative for the infection, had left the COVID-19 care within five days. Convincing data regarding 10% of the individuals could not be reliably sourced.

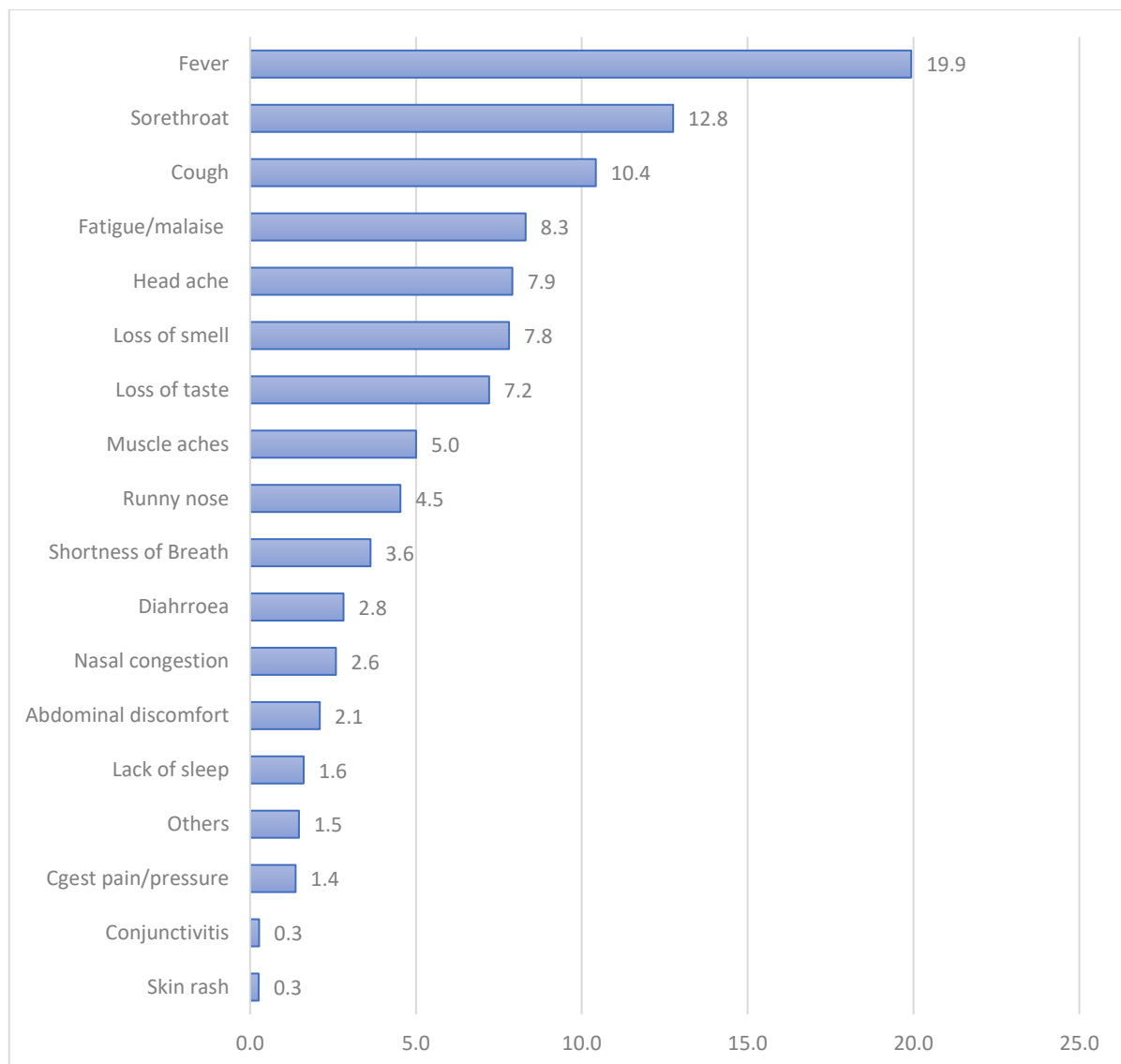


Figure 4: Percentage distribution of symptoms of individuals under Punarjani during their COVID-19 course (n=2384)

Figure 4 shows that out of the 4871 individuals under punarjani 2384 (48.9%) had been symptomatic during their COVID-19 course. Forty-four percent (2146) were asymptomatic and reliable data about 7% (341) of the individuals could not be sourced.

Fever was the most reported symptom in 19.9% (1394) individuals followed by sorethroat (12.8%) and cough (10.4). Fatigue/malaise (8.3%), head ache (7.9%), loss of smell (7.8%), loss of taste (7.2%) and muscle aches (5%) were the other notable symptoms reported. Shortness of breath, an alarming feature of COVID-19 was present only in 3.6% of the individuals. The symptoms under the category “others” had been present in 1.5%. The same has been elaborated in **Table 4**.

Table 4: percentage distribution of symptoms under the category "others".

Symptoms of COVID-19	Number of Individuals	Percentage (%)
Anxiety	11	0.16
Loss of appetite	12	0.17
Nausea/Vomiting	28	0.40
Back pain	11	0.16
Joint pain	13	0.19
Constipation	15	0.21
Mouth ulcer	4	0.06
Eye pain	4	0.06
Vertigo	1	0.01
Itching	1	0.01
Gum bleeding	1	0.01
Bleeding per nose	1	0.01
Bitter taste in the mouth	1	0.01

Regarding the complications that had occurred during the COVID-19 course of the individuals enrolled in *Punarjani*, out of the 4871 individuals, only 1.75% (85) reportedly had any serious complication.

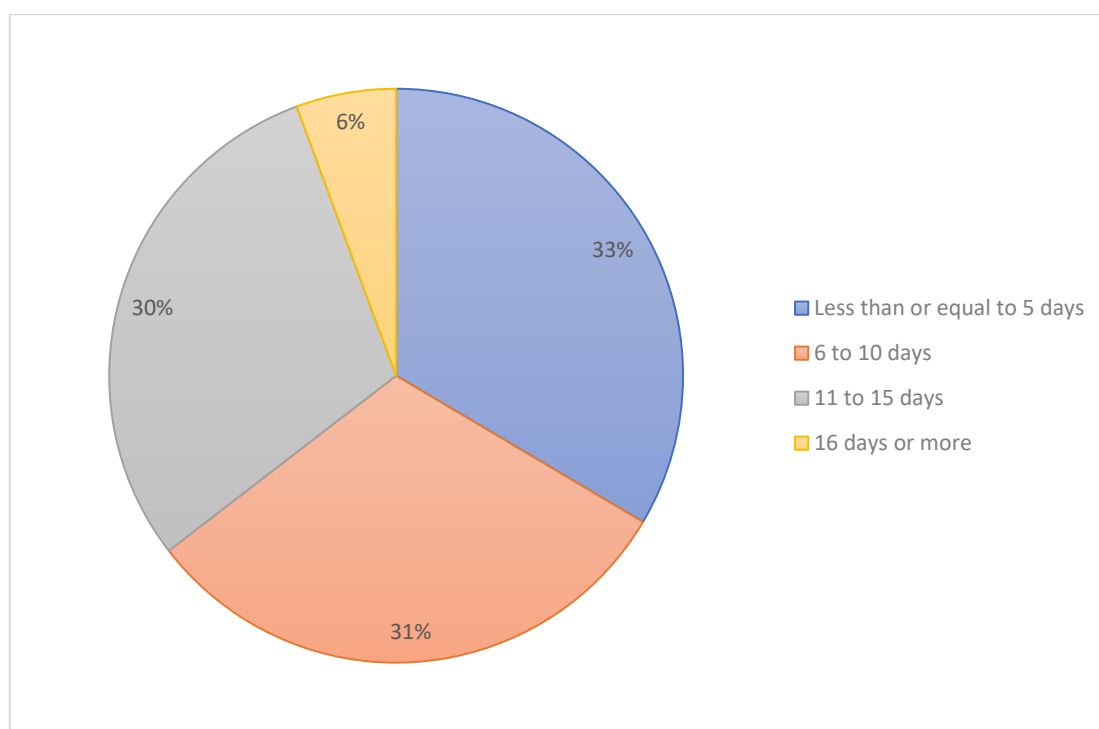


Figure 5: Duration of Ayurvedic Prophylactic Strategies received under Amritham

Out of the total 4817 individuals, only 15% (728) had previously received Ayurvedic Prophylactic Strategies during their quarantine care prior to being tested positive for the infection. Out of those 728 individuals 60% had been under APS for 6 to 15 days.

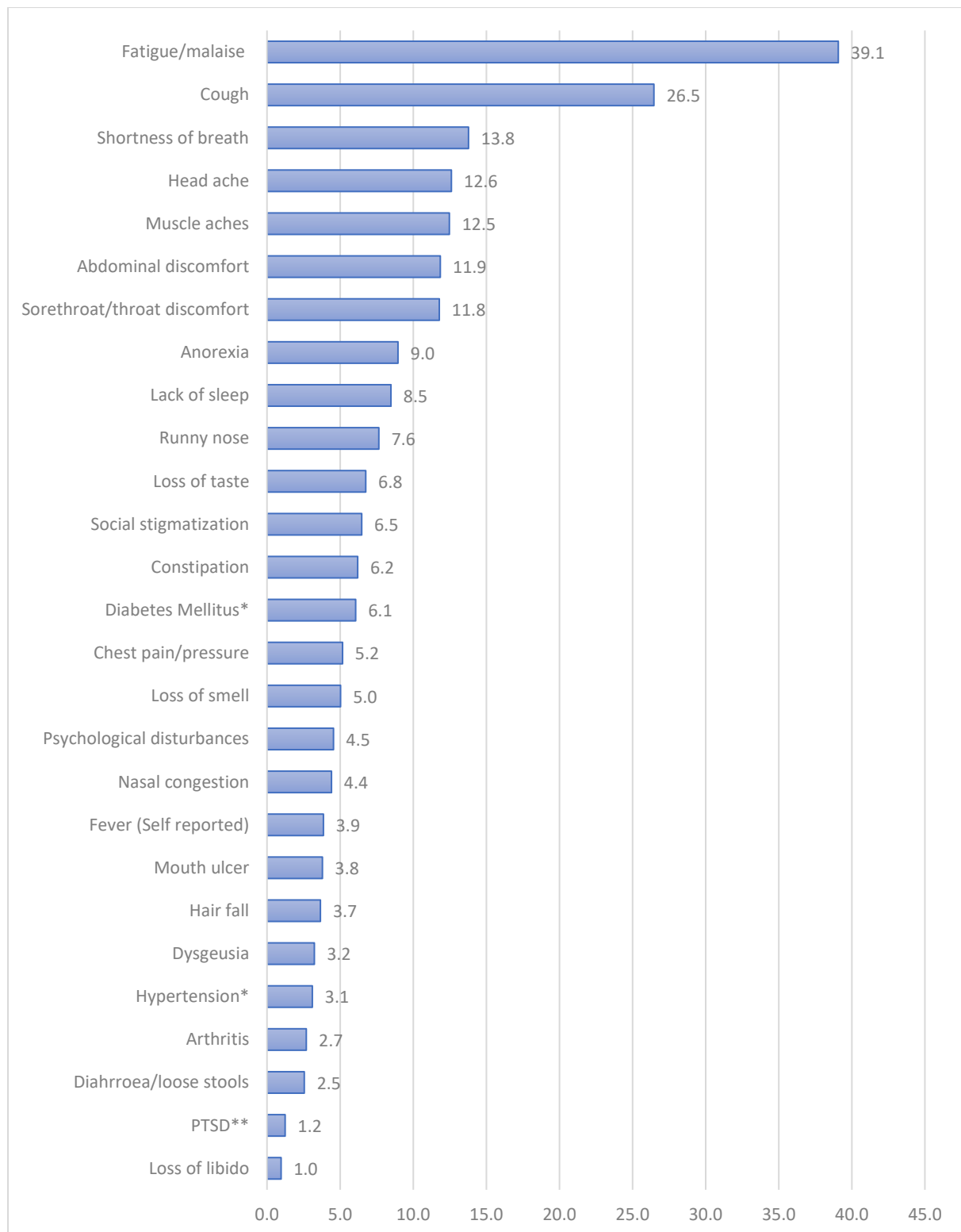


Figure 6: Spectrum of post COVID-19 sequelae reported among the individuals under Punarjani

*worsening of the pre-existing/new; **Post traumatic stress disorder

Table 5: Percentage distribution of other post COVID-19 sequelae reported among the individuals under Punarjani

Other sequelae	Number of Individuals	Percentage (%)
Joint pain	1	0.1
Bed sore	1	0.1
Hypotension	1	0.1
Ear ache	1	0.1
Epilepsy	1	0.1
Palpitations	1	0.1
Burning sensation and numbness of extremities	4	0.3
Weight loss	5	0.3
Conjunctivitis/redness of eye	6	0.4
Bitter taste in mouth	6	0.4
Liver disorders	7	0.5
Infections	11	0.8
Skin rash	11	0.8
Nausea/vomiting	13	0.9
Back pain	13	0.9

Out of the 4871 individuals under Punarjani, 30% (1451) had reported various post-COVID sequelae. Over 40 diverse symptoms were reported by the individuals during their post-COVID period. Half of them were persistent/reappearing/newly appearing COVID-19 symptoms themselves. Remaining were newly developed symptoms that were not reported as a part of the active SARS-CoV-2 infection.

Out of the 1451 individuals reported to have had post-COVID sequelae, 39.1% (567) had fatigue/malaise as the major symptom followed by cough (26.5%), shortness of breath (13.8%), head ache (12.6%) and muscle aches (12.5%). Abdominal discomfort had accounted for 11.9% of the individuals with sequelae and sore throat/throat discomfort was reported in 11.8%. Post Traumatic Stress Disorder (PTSD-1.2%) anxiety like psychological disturbances (6.5%) were also reported. Social stigmatisation had also been reported among 6.5% (94) individuals. Worsening of the pre-existing or appearing of new DM was reported in 6.1% (88) individuals and the same was 3.1% (45) for hypertension. Hair fall was observed in 3.7% (53) individuals and further details have been given in **Figure 6** and some other reported sequelae in **Table 5**. No incidence of adverse drug reactions (ADR) during the ACCS had been reported.

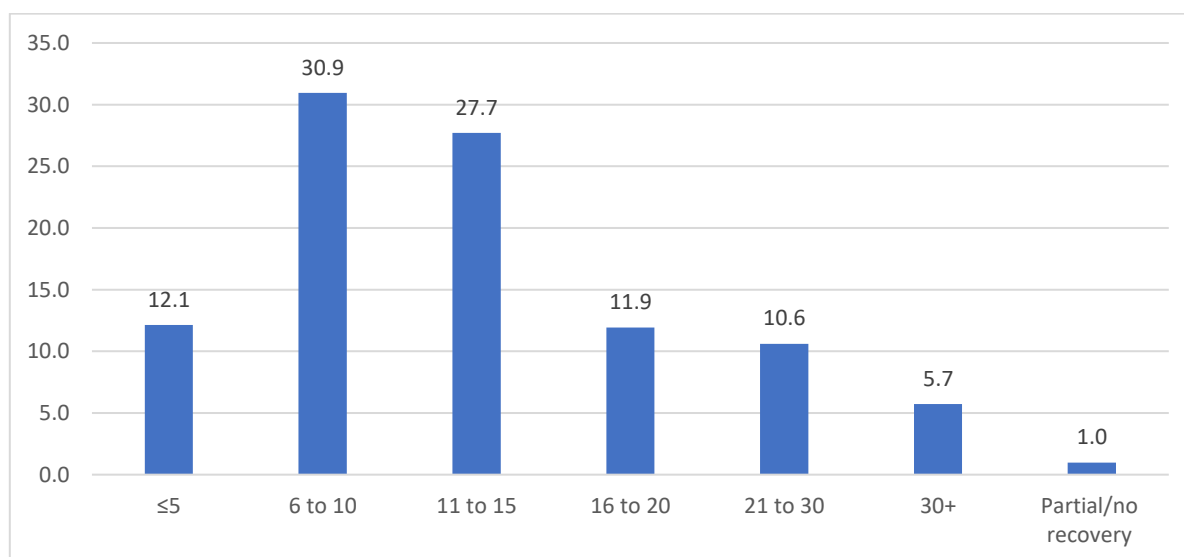


Figure 7: Percentage distribution of duration of recovery of the COVID-19 sequelae with ACCS (n=1451)

Figure 7 depicts the number of days taken for recovery from the COVID-19 sequelae among the individuals under *Punarjani*. Obviously, 91.7% (1330) individuals with COVID-19 sequelae, had reported to have recovered from the symptoms completely within 30 days of administration of the ACCS. Partial recovery was reported only in 14 individuals.

Table 6: Outcome of the ACCS under Punarjani

Outcome of the ACCS	Number of individuals	Percentage (%)
Sequelae was cured completely with the patient experiencing normalcy	1330	91.7
Sequelae was cured completely with the patient not experiencing normalcy	107	7.4
Sequelae was cured only partially	9	0.6
Sequelae was not cured at all	5	0.3
Total	1451	100

Out of the 1451 symptomatic post-COVID individual who had successfully completed the ACCS, over 90% (1330) had reportedly experienced physical as well as psychological well beings besides symptomatic relief (**Table 6**). In spite of having fully recovered from their post-COVID health issues, about 7% (107) were reportedly unable to experience any state of well-being. The remaining 1% had only partial/no recovery.

End of the report.

Data evaluated and submitted by **Dr Rajmohan V**
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തീയതി : 21.07.2020

സർക്കുലർ

വിഷയം : ഭാരതീയ ചികിത്സാ വകുപ്പ് - ആയുർവ്വേദ ഡോക്ടർ ഇവാല്യൂവേഷൻ വേണ്ടി ഫൈനലിൽ ഓഫീസർമാരെ നിയോഗിക്കുന്നത് സംബന്ധിച്ച്.

സൂചന : 30.06.2020-ലെ സ്റ്റേറ്റ് ആയുർവ്വേദ കോവിഡ് റെസ്പോൻസ് സെൽ സ്റ്റേറ്റ് കോ-ഓർഡിനേറ്റർ ഡോ. രാജ്‌മോഹന്റെ കത്ത്.

സ്റ്റേറ്റ് ആയുർവ്വേദ കോവിഡ് റെസ്പോൻസ് സെൽ സ്റ്റേറ്റ് കോ-ഓർഡിനേറ്ററിന്റെ അപേക്ഷ പ്രകാരം താഴെപ്പറയുന്ന ഭാരതീയ ചികിത്സാ വകുപ്പ്/നാഷണൽ ആയുഷ് ഖിഷൻ/നാഷണൽ ഹെൽത്ത് ഖിഷൻ എന്നീ വകുപ്പുകളിലുള്ള ഫൈനലിൽ ഓഫീസർമാരെ ആയുർവ്വേദ ഡോക്ടർ ഇവാല്യൂവേഷൻ വേണ്ടി നിയോഗിക്കുന്നു.

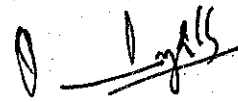
ക്രമ നം	പേര്	സ്ഥാപനം
തിരുവനന്തപുരം		
1.	ഡോ. പ്രവിത കമാരി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, ബാലരാമപുരം
2.	ഡോ. അശ്വതി എസ്	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, വർക്കല
3.	ഡോ. ആനന്ദ്	ആയുഷ് ഗ്രാമം, പെരുങ്കടവിള
4.	ഡോ. മാലിനി ആർ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കിളിമാനൂർ
5.	ഡോ. കാർത്തിക നായർ	എൻ.എച്ച്.എം ആയുർവ്വേദ ഡിസ്പെൻസറി, കരകുളം
കൊല്ലം		
1.	ഡോ. പ്രവീൺ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, തൃക്കടവൂർ
2.	ഡോ. എസ് രശ്മി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, ഇരവിപുരം
3.	ഡോ. ശ്രീദേവി	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, പരവൂർ
4.	ഡോ. വിഷ്ണു മോഹൻ	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, തലവൂർ
5.	ഡോ. എൻ ശരത്ത്	എൻ.എച്ച്.എം കല്ലുവായക്കൽ

പത്തനംതിട്ട		
1.	ഡോ. മഞ്ജു ജി എൽ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, തുമ്പമൺ
2.	ഡോ. ശ്രീദേവി എൻ നമ്പൂതിരി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, തൊട്ടപ്പുഴശ്ശേരി
3.	ഡോ. മനോജ് എം	ജില്ലാ ആയുർവ്വേദ ഡിസ്പെൻസറി, അയിരൂർ
4.	ഡോ. രസ്മി	ആയുഷ് ഗ്രാമം
5.	ഡോ. സുനിൽ കെ ജോൺ	എൻ.എച്ച്.എം ഏനാദിമംഗലം
ആലപ്പുഴ		
1.	ഡോ. നിഷ എൻ ടി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കണ്ടല്ലൂർ
2.	ഡോ. മനു വി കെ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, താഴക്കര
3.	ഡോ. അർജുൻ ഓഹൻ	എൻ.എച്ച്.എം അമ്പലപ്പുഴ
4.	ഡോ. ശാലിനി തോമസ്	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, ആലപ്പുഴ
5.	ഡോ. അരുൺ ജി ദേവ്	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, ആലപ്പുഴ
കോട്ടയം		
1.	ഡോ. ജുവൽ ജോസ്	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, കോത്തല
2.	ഡോ. നിത എം എസ്	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കമാരനെല്ലൂർ
3.	ഡോ. ധന്യ സി	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, വൈക്കം
4.	ഡോ. പ്രദീപ് തോമസ്	എൻ.എച്ച്.എം ഉന്നിമഠ്
5.	ഡോ. സുധീഷ് കുമാർ	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, നാട്ടകം (NAM)
ഇടുക്കി		
1.	ഡോ. ജിനേഷ് ജെ മേനോൻ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, എരുത്തൂർ
2.	ഡോ. ക്രിസ്റ്റി ജെ തുണ്ടിപ്പറമ്പിൽ	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി (അനക്സ്) പാറേമുക്ക്
3.	ഡോ. ദീപക് സി നായർ	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി (അനക്സ്) പാറേമുക്ക്
4.	ഡോ. അഭിഷേക് പി	എൻ.എച്ച്.എം കരുണപുരം
5.	ഡോ. കൃഷ്ണപ്രിയ കെ ബി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, വാത്തിക്കുടി
എറണാകുളം		
1.	ഡോ. സുധീൻ കൃഷ്ണൻ. ടി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, പുത്തൻകുരിശ്
2.	ഡോ. ആശാങ്കോൾ ടി. സി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, തൃക്കാക്കര
3.	ഡോ. ജിൻഷിദ് സദാശിവൻ	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, പാലക്കാട്
4.	ഡോ. നിസാർ ഖുറൈദ്	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, നോർത്ത് പറവൂർ
5.	ഡോ. ദീപ കെ സി	എൻ.എച്ച്.എം, തിരുവല്ലൂർ
തൃശ്ശൂർ		
1.	ഡോ. നേത്രാസ് പി കെ	രാമവർമ്മ ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, തൃശ്ശൂർ
2.	ഡോ. ഷിജി പി കെ	കേരള ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സ്പോർട്സ് ആയുർവ്വേദ റിസർച്ച്
3.	ഡോ. ബിബിൻ കെ മാത്യു	കേരള ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സ്പോർട്സ് ആയുർവ്വേദ റിസർച്ച്
4.	ഡോ. അരുൺ എസ് ആർ	രാമവർമ്മ ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, തൃശ്ശൂർ (NAM)
5.	ഡോ. സുബ്ബൻ കൃഷ്ണൻ	എൻ.ആർ.എച്ച്.എം കട്ടകമ്പൽ

പാലക്കാട്		
1.	ഡോ ബാബു	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി, പാലക്കാട്
2.	ഡോ. കൃഷ്ണകുമാർ എച്ച്	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കണ്ണനശ്ശേരി
3.	ഡോ. ഷബാന	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, ചെറുപ്പള്ളശ്ശേരി
4.	ഡോ. നിതിൻ ഓഫൻ	നാഷണൽ ആയുഷ് മിഷൻ
5.	ഡോ. ശാലു ശശി	എൻ.എച്ച്.എം, ജി.എ.എച്ച് ചളവറ
മലപ്പുറം		
1.	ഡോ. കവിത വി എൻ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, പാണ്ടിക്കാട്
2.	ഡോ. വൃന്ദ നായി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, മാമ്പനം
3.	ഡോ. നൗഫൽ പനക്കൽ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കൊടക്കാട്
4.	ഡോ. നൗഫൽ റഹ്മാൻ	എൻ.എച്ച്.എം ആലിപ്പനമ്പ്
5.	ഡോ. അനഃഷ	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, പൊന്നാനി (NAM)
കോഴിക്കോട്		
1.	ഡോ. സജിത്ത് വി പി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, നടുപൊയിൽ
2.	ഡോ. യദുനന്ദൻ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കടലുണ്ടി
3.	ഡോ. എൻ രാജേഷ്	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, എടച്ചേരി
4.	ഡോ. പ്രജിത പി കെ	നാഷണൽ ഹെൽത്ത് മിഷൻ
5.	ഡോ. കിഷോർ ലാൽ	നാഷണൽ ഹെൽത്ത് മിഷൻ
വയനാട്		
1.	ഡോ. രേഖ സി എൻ	സർക്കാർ ആയുർവ്വേദ ട്രൈബൽ ഡിസ്പെൻസറി, കാരിയോട്
2.	ഡോ. അരുൺ ജി	താലൂക്ക് ആയുർവ്വേദ ആശുപത്രി, സുൽത്താൻ ബത്തേരി
3.	ഡോ. മഞ്ജു പി ടി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, മുട്ടിൽ
4.	ഡോ. ബിജുല ബാലകൃഷ്ണൻ	എൻ.എച്ച്.എം വൈത്തിരി
5.	ഡോ. സിജോ	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, പാതിരിച്ചാൽ (NAM)
കണ്ണൂർ		
1.	ഡോ. ദീപരാജ് വി ടി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കതിരൂർ
2.	ഡോ. ശ്രുതി ടി പി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, കിഴൂർ-ചാവശ്ശേരി
3.	ഡോ. പ്രവീൺ പി ആർ	എൻ.എച്ച്.എം ചെറുപ്പുഴ
4.	ഡോ. സുജ ജി നായർ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, അഞ്ചരക്കണ്ടി
5.	ഡോ. ജയേഷ്	സർക്കാർ ആയുർവ്വേദ ആശുപത്രി, പയന്നൂർ

കാസറഗോഡ്		
1.	ഡോ. ജയ ജി	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, മുദിയക്കൽ
2.	ഡോ. ഭാഗ്യശ്രീ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, അമ്പലത്തുകര
3.	ഡോ. ഫാത്തിമ യാസ്മിൻ	സർക്കാർ ആയുർവ്വേദ ഡിസ്പെൻസറി, ചെമ്മനാട്
4.	ഡോ. സത്യേന്ദ്ര ഡി	എൻ.എച്ച്.എം ഡിസ്പെൻസറി, ഉലിയാർ
5.	ഡോ. നിഷാന്ത്	ജില്ലാ ആയുർവ്വേദ ആശുപത്രി. കാസറഗോഡ്

വിശ്വാസപൂർവ്വം,



ഡയറക്ടർ

ഭാരതീയ ചികിത്സാ വകുപ്പ്

എല്ലാ ജില്ലാ ഡെപിട്രി ഓഫീസർമാർക്കും.

STATE AYURVEDA COVID-19 RESPONSE CELL

The Essential Drug List

FOR THE AYURVEDIC PREVENTION AND
CONVALASCENT CARE IN COVID-19

Department of AYUSH,
Government of Kerala
4-15-2020

Guidelines for Usage

- The EDL is solely intended for the purpose of Ayurvedic prevention and convalescent care of COVID-19 at the Regional and District Ayurveda COVID-19 Response Cells as well as *Ayur Reksha Clinics* across the state.
- The medicines from the EDL shall be administered only under the strict guidance of registered Ayurvedic practitioners only.
- The administration of the EDL shall be in accordance to the approved annexures attached herewith.
- *The EDL under any circumstances shall not be used as a cure of COVID-19 patients (with or without laboratory confirmation) or individuals with symptoms of potential COVID-19 manifestations.*

Kasahayas

1. Indukantham
2. Nayopayam
3. Pathya Shadamgam
4. Elakanadi
5. Vyaghryadi
6. Drakshadi
7. Dasamoola Katuthrayam
8. Shadangam/ Amruta Shadanagam (as panakam)

Choornam/Gudika

1. Sudarsanam Choornam/Gudika/Tablet
2. Vilwadi Gudika/Tablet
3. Aswagandha Choornam
4. Triphala Choornam
5. Guduchi Choornam
6. Yashti Choornam
7. Pippali Choornam

Ghrutham

1. Indukantham
2. Bruhat Chagaladi

Avaleham

1. Kooshmanda Rasayanam
 2. Agasthya Rasayanam
 3. Pippali Rasayanam
 4. Amrutha Prasam
 5. Chyavana Prasam
-

Annexures – Technical

Annexure 1

Guidelines for Healthy People

Non Pharmacological Interventions

Diet

- a. Food: The lockdown reduces physical activity and at the same time can induce craving for food. It is important to refrain from overeating and especially indulgence in snacking and junk food. Here are some general guidelines:
- Eat only when you are hungry
 - Avoid frequent snacking just to while away time. Snacks may be used only if you are really hungry. Dry fruits, homemade chips, boiled banana etc. are the options to select from.
 - Reduce the quantity to $\frac{3}{4}$ or $\frac{1}{2}$ of what you take on an active normal day.
 - Rice gruel (Kanji) at least once a day is an ideal option
 - Avoid or restrict the use of non-vegetarian food.
 - Try adding $\frac{1}{4}$ teaspoon of dry ginger powder while cooking the rice. This will aid digestion. Good gut is the foundation of good health.
 - ‘Chammanthi’ made of gooseberry (Nellikka) and ginger (inchi) can be a healthy and tasty recipe
 - In curry, pastries, snacks, tiffin, soups, wherever possible, use green gram (cheru payar) liberally.
 - Minimize the use of black gram (uzhunnu).
 - Include locally available vegetables and fruits in the daily menu as per the availability. Bananas, Mangoes, Jackfruit, Guavas and other seasonal fruits available in our villages have good nutritional value. Use them according to one’s digestive capacity. .
 - Avoid pickles, hot spicy foods, and garam masala.
- b. Beverages:

- The water for drinking may be converted into an excellent medicine by some simple techniques. See one example: boil the water with comfortable amounts of dry ginger, coriander seeds (malli), thulasi leaves, muthanga, panikkoorkayila, ayamodakam (ajwain seeds), and turmeric. The quantities need not be that specific. Make it a tasty chukkuvellam. All members of the family can quench their thirst with this.
- Drink tea and coffee, the popular beverages of Kerala, sparingly during the lockdown. There are reports of sleeplessness, hyperacidity, heartburn and other similar issues caused by excessive use of tea and coffee.
- ‘Chukkukaappi’ may be a safer alternative, which is a simple digestive and medicinal beverage. Also try similar drinks like thulasikkaappi, mallikkaappi etc.
- Those who are familiar with diluted milk, or milk as such, try it with a piece of dry ginger (chukku) and a pinch of turmeric powder while boiling it. It is more helpful to improve the respiratory health. Goat’s milk has an edge over cow’s milk in this regard.
- Sarbath prepared out of nannari/naruneendi is a tasty and healthy option for healthy persons, but don’t prepare with ice water.
- Diluted buttermilk (sambharam) with some salt, ginger and curry leaves is an exceptionally healthy drink. Buttermilk boiled with turmeric, dry ginger and curry leave (kaachiya moru) can keep the digestive tract healthy and smooth. This was a panacea of our ancestors.
- Avoid Curd.
- Avoid refrigerated water. It can invite throat infection. Please remember that sore throat of any sort may be suspected as an initial presentation of COVID. Don’t jeopardize the health status of your respiratory tract.
- Don’t use carbonated and alcoholic beverages of any sort.

Personal hygiene and Activities of daily living

- Go to the bed early at night and get up early in the morning. Sound sleep is an excellent tonic for the body and mind.

- Don't opt to have a nap during daytime. Excessive sleeping is a good reason for weight gain.
- Don't use an air-conditioner. Keep the windows open and the rooms properly ventilated. If at all using an AC, never set temperature to below 25 degrees. When you use a fan, don't sit or lie down right below it, especially at night. These practices are to keep your respiratory tract healthy.
- Keep the day actively engaged in works that you can do at home. Prepare a timetable for the lockdown period.
- Start reading good books. During these days, reading can be developed into a healthy habit, good for the mind as well.
- Spend time with your loved ones.
- Try activities like cooking, painting, stitching, gardening, games, etc.
- Do things on a timetable.
- Be regular with the morning routines like brushing the teeth, toilet, bathing, etc. as the season is warm and humid in Kerala, wash your body twice and head once (preferably in the morning)
- Nasyam: put one drop of coconut oil or sesame oil in each nostril and inhale. This may be done in the morning before head bath.
- Don't bathe immediately after a meal.
- Exercise moderately but regularly. An adult with moderate built shall exercise two times a day. It can be Yoga, Skipping, Treadmill, *Orbitrek* or something of that sort. Opt for those, which can be done indoors. Yoga has an edge over the others because it can be incorporated with pranayama and meditation, which will be excellent support for the mind as well.
- Keep good posture while sitting, lying down or standing. Faulty postures may end up in spinal disorders by the time we come out of the lockdown period.
- Keep yourself happy and composed. Stress is the biggest enemy of our immune system.

Hygiene of the premises

- Keep your home and surroundings clean. This is essential for prevention of all sorts of diseases.

- Manage the domestic waste properly. Don't allow mosquitoes, rats or other rodents to breed around.
- Smoke (dhoopanam) all the rooms of your house with herbs. Turmeric, Garlic, mustard, Neem leaves, and Salt. Aparajitha churnam is another option. If available vayambu, kottam, katukka, and yavam may also be used. These are all given as choices. Add a bit of ghee while doing the dhoopanam.

Pharmacological Interventions

Preventive Medical Practices

- For a healthy person, no medicine is needed. But certain preventive medical practices added on to the daily activities may give enhanced capacity to fight against infections. They are listed below:
 - Apply or put a drop of coconut oil in your nostrils in the morning after brushing teeth.
 - Warm gargle with water boiled with dry ginger, turmeric, panikkoorkayila, and a bit of salt. This may be done after the nasal drops.
 - Steam inhalation with turmeric, thulasi leaves and panikkoorkayila in the evening.
- a. Some medicines are helpful in improving the general health.
- i. 15 ML Indukantham kashayam diluted with 60 ML pre-boiled cool water may be taken two times a day before food.
 - ii. 10 GM of Kooshmandarasayanam (for those with good appetite) or Agasthyarasayanam (for those with less appetite) may be taken two times a day after food. Dose may be adjusted according to digestive capacity.
 - iii. Age appropriate modifications of dose and frequency of medicines are to be made by the medical team through the facility entrusted for the same by the Govt.

Annexure 2

CONVALESCENT PERIOD CARE

The Non-pharmacological intervention

1. Follow annexure 1.
2. Head bath shall not be regular during this period. Those who have residual symptoms like breathing difficulty may avoid head bath until the symptoms resolve. Use warm water for body and boiled cool water for head while bathing. Apply Rasnadi powder on the crown after head bath. Oil bath shall be started only after 7 days after recovery and on the advice of an Ayurvedic physician.
3. Strictly avoid contact with general public
4. Pranayama, yoga can be continued under medical advice
5. Strictly avoid pungent and sour foods and reduce salt intake.
6. Drinking water can be boiled with chittamruthu, chukku, Tulsi, jeerakam and ayamodakam as per availability.
7. cherupayar soup, banana / arrowroot powder soup with chukku and sarkara can be taken in the evening..
8. 1 teaspoon of small onion made into a paste with honey can be taken once or twice daily.
9. Milk boiled with turmeric and dry ginger can be taken once.
10. Keep yourself engaged in music, reading, communicating with friends and relatives, write down your experiences during the disease.

Pharmacological intervention*

1. Strictly continue all medicines prescribed by the physician during the COVID attack and the regular medicines prescribed for other comorbidities like diabetes
2. 15 ML Elakanadi kashayam with 45 ML boiled cool water and ½ teaspoon Jeerakappodi as mempoti two times a day. For non-diabetic patients, add 1 teaspoon honey also. Other options are :
 - a. Dasamoolakatuthrayam kashayam
 - b. Indukantham kashayam
 - c. Vyaghryadi kashayam
3. Rasayana Chikitsa to be opted for to avoid potential sequel of the infection. Special consideration shall be given to major organs like lungs, liver kidneys etc. A list of medicines in this regard is given below:
 - a. Kooshmanda rasayanam
 - b. Agasthya rasayanam
 - c. Amrutha prasam
 - d. Chyavana prasam
 - e. Pippali rasayanam
 - f. Indukantham ghrutham
 - g. Bruhat chagaladi ghrutham

*This needs medical advice from the facility provided for this purpose

Annexure 3

High risk like health care professionals and other field staff working with corona patients (without comorbidities*)

Non Pharmacological Interventions

1. Follow Annexure 1.
2. Try to sleep for 6 hours a minimum
3. Practice deep breathing/yoga/pranayama every day. Find time to relax and exercise regularly. Specific exercise modules for this purpose are incorporated in this program
4. Keep yourself hydrated. Drink plenty of water. More advice in this regard is available in Annexure 1. Some extra options are given below:
 - a. Limewater can be fortified with any of the above drugs like ginger, thulasi leaves, panikkoorkka etc, sugar candy would be more helpful instead of sugar.
 - b. gooseberry (2-3nos) and cardamom(1no) can be used to make juice and take with Honey
 - c. Black dry grapes- 20 nos is kept in water overnight, squeezed and juice can be taken with honey or sarkkara
 - d. Dry ginger, coriander, jeeraka, uluva, tulsi leaves, elakkai can be slightly roasted, powdered and boil in sarkkara to make a syrup. This can be diluted with water and consumed.
5. Do not suppress your natural urges to urinate, pass motion etc.
6. Do steam inhalation twice (at least once) a day. More advice in this regard is available in Annexure 1.

Pharmacological Interventions

1. Follow Annexure 1.
2. Chyavanaprasam 10 GM shall be taken two times a day after food followed by ½ glass of milk boiled with dry ginger and turmeric.

**Cardiovascular Diseases, Diabetes, Hypertension, Chronic Respiratory Diseases, Cancer*

Annexure 4

General Guidelines for People with Comorbidities

1. Chronic Respiratory Ailments

I. Non Pharmacological Intervention

- a. Diet: General directions in **Annexure 1** shall be followed
- b. The food should be light and warm. As far as possible avoid late night meal
- c. Never eat bellyful.
- d. Avoid refrigerated food.

Drinking water: additional suggestions are listed below.

- e. 10 Tulasi leaves / 2 panikoorka) + 1 teaspoon crushed coriander seeds + 2 pinch dried ginger powder boil in 1 litre water – can be used for drinking comfortably warm.
- f. Chukkukaappi
- g. Mallikkaappi
- h. Thulasikaappi
- i. Avoid milk and milk products in general
- j. Avoid carbonated, refrigerated drinks

B. Activities of Daily Living

- a. Breathing exercises/pranayama/yoga/physical exercises. (Special Instructions are given)
- b. Avoid lying directly beneath the fan at night.
- c. Avoid AC
- d. Steam inhalation (Refer Annexure 1 for details). Cover the eyes during steam inhalation.
- e. Gargling two times a day: (Refer Annexure 1 for details).
- f. Nasyam: (Refer Annexure 1 for details).

II. Pharmacological Intervention

- a. Special medicines shall be used as supportive measures in consultation with Ayurveda physician using the telemedicine facility provided by the Govt.

Annexure 5

General Guidelines for People with Comorbidities

1. Diabetes Mellitus

General Guidelines:

1. All regular medicines shall be continued without fail.
2. Keep monitoring the blood sugar values at regular intervals.
3. Follow the diet prescribed by your doctor.

I. Non Pharmacological Interventions

A. Diet

- a. Limit the amount of grains in your diet
- b. Wheat and Small millets like Ragi can be an alternative
- c. Whole green gram (Cherupayar) is a good option
- d. steam cooked foods are considered beneficial
- e. Special Precautions: Indian gooseberry (nellikka/amla) and turmeric are beneficial for improving general immunity and also to control diabetes. These can be used as:
 - 4-5 raw gooseberry + one small piece of raw turmeric (manjal) can be ground together to take the juice and can be taken once in a day.
 - Dry gooseberry powder- 1 tsp, turmeric powder -3 pinch, can be mixed in hot water and taken once a day.
 - Dry gooseberry powder- 1 tsp, turmeric powder -3 pinch can be boiled in 1 ½ glass water, to be reduced to ¾ glass and can be taken once a day.
- f. Fenugreek should be dry fried and made into powder and can be taken with hot water, ½ tsp once a day.
- g. 1 tsp triphalachoornam can be taken with luke warm water at bedtime for relieving constipation and is good for diabetes also.
- h. For drinking water: Boil 2 litres of water with ½ tsp coriander or ½ tsp cumin seeds with 10 crushed pieces of jackfruit leaf (plavila) petiole or mango leaf (mavila) petiole, and add 10 tulsi leaves or 2 panikkoorka (indian borage) leaf, when it starts boiling. Keep this closed for a while. And use as drinking water when cold.

II. Pharmacological Intervention

- a. Special medicines shall be used as supportive measures in consultation with Ayurvedic physicians using the telemedicine facility provided by the Govt.

Annexure 6

General Guidelines for People with Comorbidities

1. Cardiac Patients and Hypertensive Patients

General Guidelines:

1. All regular medicines shall be continued without fail.
2. Keep monitoring the blood pressure at regular intervals.
3. Follow the diet prescribed by your doctor.

I. Non Pharmacological Interventions

A. Diet

- a. Spicy, sour and fried items should be avoided.
- b. Salt intake shall be limited
- c. Add shallots, ginger, coriander, garlic, black pepper, turmeric, curry leaves etc shall be more included in daily foods.
- d. For panajalam: Boil 2 litres of water with $\frac{1}{2}$ tsp coriander or $\frac{1}{2}$ tsp cumin seeds with 10 crushed pieces of jackfruit leaf petiole (plavilanjettu) or mango leaf petiole (mavilanjettu), and add 10 tulsi leaves or 2 panikkoorka (indian borage) leaf, when it starts boiling. Keep this closed for a while. And use as drinking water when cold.
- e. Special Guidelines: 8 cloves of garlic, and $\frac{1}{2}$ tsp cumin seeds are crushed and boiled with $1\frac{1}{2}$ glass water and $\frac{1}{2}$ glass milk and is reduced to $\frac{3}{4}$ glass. It is then filtered and taken once a day. (Those who don't prefer milk can use water alone). Or 5 flaps of garlic can be roasted, ground and eaten as such.

B. Activities of daily living

- a. Follow annexure 1.
- b. For exercise, follow special guidelines in that regard

II. Pharmacological Intervention

- a. Special medicines shall be used as supportive measures in consultation with Ayurvedic physicians using the telemedicine facility provided by the Govt.

Annexure 7

General Guidelines for People with Comorbidities

1. Cancer

General Guidelines:

1. All regular medicines shall be continued without fail. .
2. Follow the diet prescribed by doctor.

Follow the instructions of **Annexure 1**.

Annexure 8

High risk health care professionals and other field staff working with corona patients (with comorbidities*)

General Guidelines:

- a. Follow the corresponding special annexure according to the specific comorbidity

Annexure 9

Ministry of AYUSH

Ayurveda's immunity boosting measures for self care during COVID 19 crisis

In the wake of the Covid 19 outbreak, entire mankind across the globe is suffering. Enhancing the body's natural defence system (immunity) plays an important role in maintaining optimum health.

We all know that prevention is better than cure. While there is no medicine for COVID-19 as of now, it will be good to take preventive measures which boost our immunity in these times.

Ayurveda, being the science of life, propagates the gifts of nature in maintaining healthy and happy living. Ayurveda's extensive knowledge base on preventive care, derives from the concepts of "Dinacharya" - daily regimes and "Ritucharya" - seasonal regimes to maintain healthy life. It is a plant-based science. The simplicity of awareness about oneself and the harmony each individual can achieve by uplifting and maintaining his or her immunity is emphasized across Ayurveda's classical scriptures.

Ministry of AYUSH recommends the following self-care guidelines for preventive health measures and boosting immunity with special reference to respiratory health. These are supported by Ayurvedic literature and scientific publications.

Recommended Measures

I General Measures

1. Drink warm water throughout the day.
2. Daily practice of Yogasana, Pranayama and meditation for at least 30 minutes as advised by Ministry of AYUSH (#YOGAatHome #StayHome #StaySafe)
3. Spices like Haldi (Turmeric), Jeera (Cumin), Dhaniya (Coriander) and Lahsun (Garlic) are recommended in cooking.

II Ayurvedic Immunity Promoting Measures

1. Take Chyavanprash 10gm (1tsf) in the morning. Diabetics should take sugar free Chyavanprash.
2. Drink herbal tea / decoction (Kadha) made from Tulsi (Basil), Dalchini (Cinnamon), Kalimirch (Black pepper), Shunthi (Dry Ginger) and Munakka (Raisin) - once or twice a day. Add jaggery (natural sugar) and / or fresh lemon juice to your taste, if needed.
3. Golden Milk- Half tea spoon Haldi (turmeric) powder in 150 ml hot milk - once or twice a day.

III Simple Ayurvedic Procedures

1. Nasal application - Apply sesame oil / coconut oil or Ghee in both the nostrils (Pratimarsh Nasya) in morning and evening.
2. Oil pulling therapy- Take 1 table spoon sesame or coconut oil in mouth. Do not drink, Swish in the mouth for 2 to 3 minutes and spit it off followed by warm water rinse. This can be done once or twice a day.

IV During dry cough / sore throat

1. Steam inhalation with fresh Pudina (Mint) leaves or Ajwain (Caraway seeds) can be practiced once in a day.
2. Lavang (Clove) powder mixed with natural sugar / honey can be taken 2-3 times a day in case of cough or throat irritation.
3. These measures generally treat normal dry cough and sore throat. However, it is best to consult doctors if these symptoms persist.

1. The above measures can be followed to the extent possible as per an individual's convenience.
2. 2 These measures are recommended by following eminent Vaidyas from across the Country as they may possibly boost an individual's immunity against infections.

1. Padma Shri Vaidya P R Krishnakumar, Coimbatore
2. Padma Bhushan Vaidya Devendra Triguna, Delhi
3. Vaidya P M Varier, Kottakkal
4. Vaidya Jayant Devpujari, Nagpur
5. Vaidya Vinay Velankar, Thane
6. Vaidya B S Prasad, Belgaum
7. Padma Shri Vaidya Gurdeep Singh, Jamnagar
8. Acharya Balkrishna ji, Haridwar
9. Vaidya M S Baghel, Jaipur
10. Vaidya R B Dwivedi, Hardoi UP
11. Vaidya K N Dwivedi, Varanasi
12. Vaidya Rakesh Sharma, Chandigarh
13. Vaidya Abichal Chattopadhyay, Kolkata
14. Vaidya Tanuja Nesari, Delhi
15. Vaidya Sanjeev Sharma, Jaipur
16. Vaidya Anup Thakar, Jamnagar