



Message from Dean (Neurosciences)

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Timely testing vital to fight COVID-19

Timely and accurate laboratory testing is an essential part of the management of COVID-19 for chalking out vital infection control strategies and slowing down the pandemic.

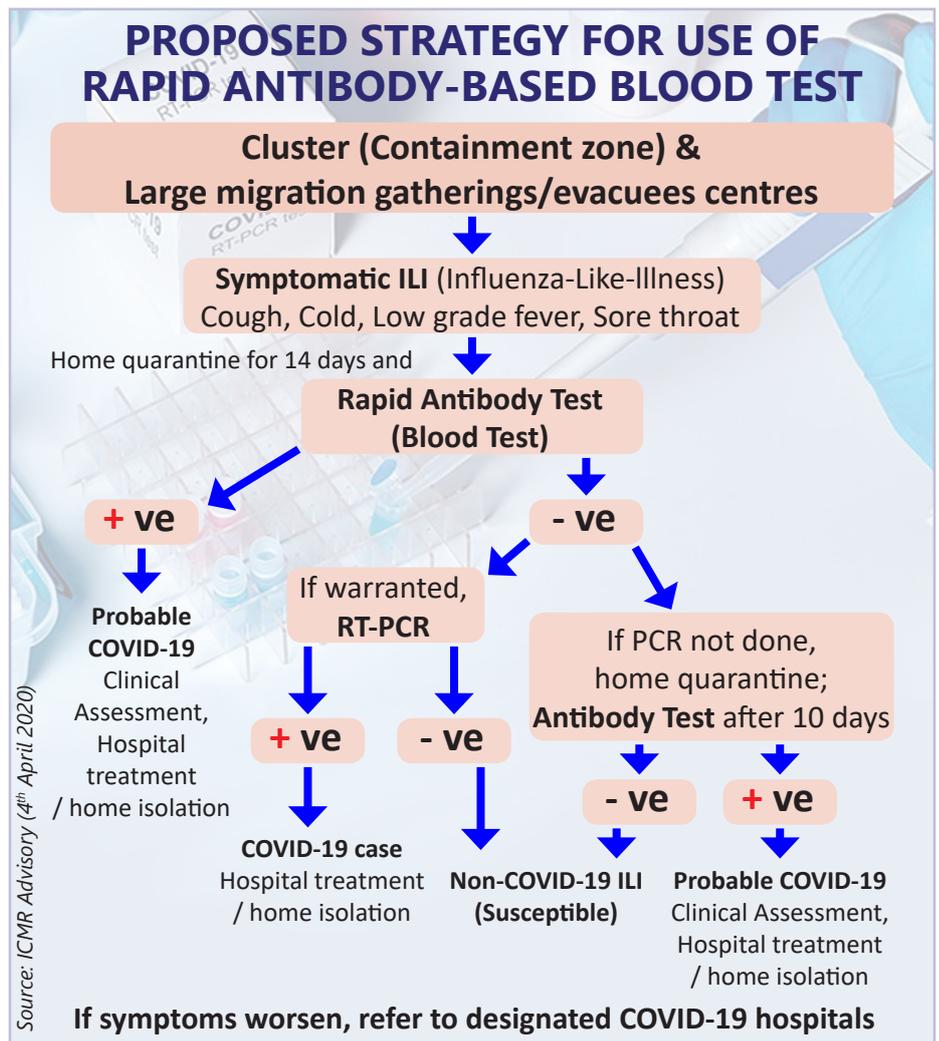
The Union Ministry of Health & Family Welfare and Indian Council of

NIMHANS Helpline

The national 24/7 helpline (080-46110007) launched by NIMHANS on 29th March, to address mental health and psychosocial issues of people during the lockdown, has evoked good response. The helpline, currently available in seven languages, received 11,311 calls as of 12th April.

Initially, the callers expressed concerns related to various medical problems and logistical issues, resulting from nationwide lockdown. Over time, high proportion of callers reported their main reason for contact was related to psychological problems that had started or worsened owing to the pandemic.

NIMHANS has tied up with various mental health institutes across the country to provide emotional and psychosocial support to individuals experiencing increased anxiety and stress due to the COVID-19 crisis. Multi-language capacities of the helpline will soon be increased to expand the reach of the helpline.



Medical Research (ICMR) are working relentlessly to implement scientific interventions and expand capacity to diagnose and manage the pandemic.

The ICMR has procured 10 lakh Reverse Transcription-Polymerase Chain Reaction (RT-PCR) kits used for diagnosis and 7 depots have been established for uninterrupted supply of reagents across the nation for efficient distribution to government testing laboratories, according to a release from the ICMR.

The ICMR has a constant vigil on the national testing strategy in line with the current trend of the outbreak. RT-PCR is the gold standard testing method for COVID-19 diagnosis and is in place in all the laboratories.

Nineteen non-US FDA EUA/CE IVD real-time RT-PCR kits have been validated by ICMR, of which five have been recommended based on 100 percent concordance with positive and negative samples. The

COVID-19 Cases	Confirmed	Deaths
India	7987	308
Karnataka	232	6

* as on 13 April 2020 (8.00 am)

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Online yoga sessions

The Department of Integrative Medicine, NIMHANS has initiated online guided yoga practice sessions for stress management during COVID-19 crisis. The sessions will be conducted from Monday to Friday, barring closed/government holidays, twice a day from 7 am to 7.45 am and 11 am to 11.45 am. Each session will be followed by a brief 15-minute question and answer session to facilitate proper understanding of the yoga practices. More than 1000 people took part in the sessions held last week.

The online sessions, hosted through Zoom communication app, are open to all interested in practising yoga. It is advised to practice on an empty stomach (avoid eating for 1-2 hours before the session), with loose and comfortable clothes.

For details, visit www.nimhansyoga.in

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recommendations have been shared with the Central Drugs Standard Control Organisation (CDSCO) for taking it forward, the release stated.

Apart from this, antibody-based tests have also been made available for sero-surveillance. However, antibody tests are not suitable to diagnose live COVID-19 infections. An advisory to start rapid antibody based blood test for COVID-19 as a strategy for areas reporting clusters (containment zone) and in large migration gatherings/evacuees centres has also been released. The ICMR has validated seven such test kits for use. In addition to this, all US-FDA/EU CE approved RT-PCR and antibody kits can be used for COVID-19 diagnosis after approval from Drug Controller General of India (DCGI).

The ICMR has developed guidelines ranging from preparation of network of government and private laboratories to ensure efficient validation/evaluation of new diagnostic kits. It has

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The COVID-19 pandemic has brought immeasurable health, social, economic, psychological and spiritual problems on citizens around the world in disproportionate amounts, more so in India because of its population, economy, culture and other factors.

During the national lockdown period from March 21 till April 14, a wide gamut of measures ranging from active and aggressive case and contact tracing to e-surveillance along with case management, training of health teams, deployment of front line workers, quarantine, isolation, disinfection, setting up control rooms, augmenting medical resources, increasing availability of PPEs, dedicated hospitals and / or beds, organising relief supplies, public education, helplines for public, greater use of technology, improving hospital care practices and several others have delivered some good results. In addition, a host of social and economic measures have provided some relief to the society at large.

The future trajectory of the pandemic in India is still unclear and the Indian graph – may steeply

increase, may have a slow climb, increase in select areas, may become endemic foci or may even start flattening with a downhill course. While the lockdown has definitely slowed transmission, the extent of tracing – quarantine – testing – treatment – isolation and public compliance to social distancing will determine the future course. Once the community members become mobile, further spread in unexposed and unaffected populations is definitely a possibility and reinfection is an emerging threat even after the current phase ends.

With nearly 300 Indian districts being affected, data driven state and district specific action plans for convergence of activities with targeted interventions in an intensive manner is vital. Differential approaches based on data and strong coordinated response of state and district public health systems at the local level will be the need of the hour. In all places, mental health support of populations without stigmatisation is highly essential in these challenging times.

Dr. G. Gururaj

Sr. Professor of Epidemiology

validated and recommended Truenat beta CoV test on Truelab workstation as a screening test. All positives through this platform will need to be reconfirmed by confirmatory assays for COVID-19. All negatives may not be processed further. Currently, there are nearly 300 Truelab workstations already deployed in country and it will be utilized for the testing, according to the release.

Revised strategy

According to the ICMR revised strategy for testing, asymptomatic direct and high-risk contacts of a confirmed case should be tested once between day 5 and day 14 of coming in his/her contact. All symptomatic individuals who have undertaken international travel in the last 14 days are also brought under the testing protocol.

All symptomatic contacts of laboratory-confirmed cases will also have to be tested. The new strategy will also cover all symptomatic healthcare workers and patients with Severe Acute Respiratory Illness (SARI), as per the guidelines.

In hotspots or clusters, as designated by the Union Ministry of Health and Family Welfare, and in large migration gatherings or evacuees centres, all symptomatic influenza-like illness (fever, cough, sore throat, runny nose) will be tested for rRT-PCR within 7 days of illness. After 7 days of illness, antibody test will be conducted—if negative, confirmed by rRT-PCR test. The ICMR revised its strategy in view of a spurt in COVID-19 cases in the country last week. ■

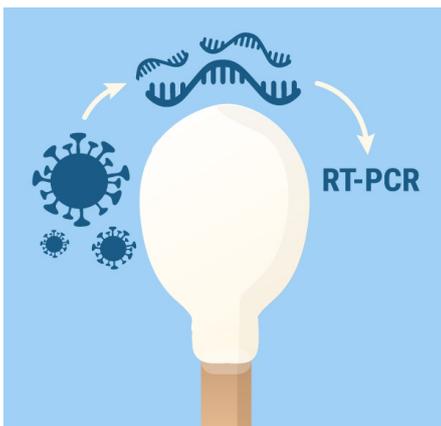
Testing times, NIMHANS on the right track...

In conversation with Dr. V. Ravi, Senior Professor & Head, Department of Neurovirology, NIMHANS

Coronavirus disease (COVID-19) was declared a Public Health Emergency of International Importance on 30 January 2020, and officially recognized as a pandemic by the World Health Organization on 11 March 2020.

One of the key measures in reducing the spread of COVID-19 across the globe is testing. This is important both for clinical management and for reasons related to Public Health and Epidemiology. In the current context, detecting the virus is most sensitive in early phase of infection, and thus prevents its spread. PCR (Polymerase Chain Reaction) is being used for diagnosing coronavirus as it is highly accurate (Sensitive and Specific) i.e. able to detect even very small quantities of the virus. As the Coronavirus multiplies in the lungs and other parts of the respiratory system, taking a throat swab would be a very useful strategy.

Real-time reverse transcription polymerase chain reaction (RT-PCR) is currently the **gold standard method** for COVID-19 diagnosis. Polymerase enzyme is responsible for the process of DNA replication; PCR technique creates millions of copies of a specific segment of the genetic material of the virus. The chain reaction is how the DNA fragments are replicated,



Source/Credit: Promega Connections



exponentially – one is copied into two, the two into four, and so on.

When we take a nasopharyngeal swab specimen—secretions from the back of the nose and throat, we are taking sample of the genetic material of the different organisms including the viruses which are residing in the throat. Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has RNA as its genetic material, which has to be converted into DNA. For this, the technique includes a process called reverse transcription (RT). A reverse transcriptase enzyme transcribes the RNA into DNA. Copies of the DNA are then generated and amplified. A fluorescent DNA binding dye called the probe indicates the presence of the virus. Greater the number of organisms stronger is the output. The technique is highly sensitive and can deliver a reliable diagnosis. Very importantly, the test is able to distinguish COVID-19 from other closely-related viruses and provides faster and reliable results, while minimizing potential errors or contamination. We have been using PCR methods in detection of the Swine Flu (H1N1) virus, viruses causing brain fever (Encephalitis),

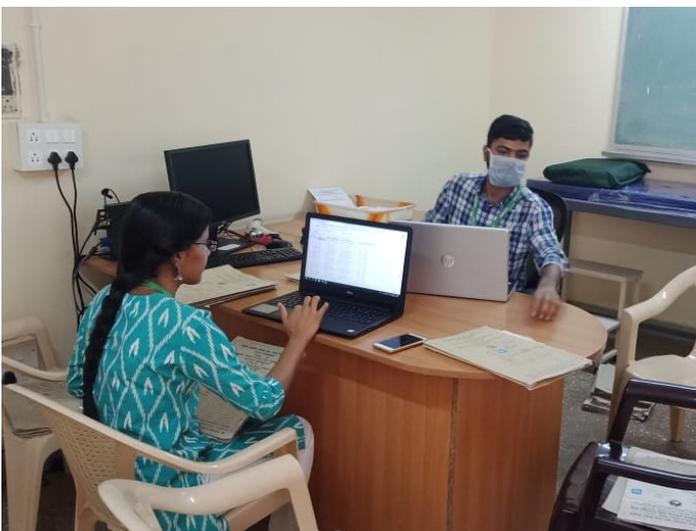
etc. In the absence of proven effective therapy or a vaccine, diagnostic testing becomes a valuable tool to track the spread of the disease. With more results pouring in, the testing protocols (who all should be tested) are being continuously reviewed and measures initiated accordingly.

After approval from the Indian Council of Medical Research (ICMR), with effect from 4 April 2020, NIMHANS has started testing for SARS-CoV-2 in clinical specimens from suspected COVID-19 patients or their contacts. The Institute has a state-of-the-art laboratory to carry out the tests including a Biosafety Level III laboratory that can be used for virus isolation.

Serological antibody blood tests will also be started soon, after obtaining the necessary kits. In these immune-assays, rather than analyzing genetic material, the tests detect proteins produced either by the virus itself, or by the body's immune system in response to the virus. These tests detect evidence of past or current infections and will help generate precise epidemiological information needed to contain and mitigate the virus spread. ■



- A dedicated team of doctors, nursing officers and support staff has been sensitised regarding the handling of COVID-19 cases, so that their services can be utilised at any point of time.
- OPD services have been temporarily withdrawn, until further notice. All nonessential elective procedures and surgeries have been postponed.
- Teleconsultation for the follow-up of neurology patients has been initiated. These patients will be contacted through their registered phone numbers and enquired regarding their present condition.
- Centre for Addiction Medicine, NIMHANS completed 100 e-consultations in two weeks during COVID-19 lockdown. This service will be open till the end of lockdown.
- A tele-support network has been started by the Department of Clinical Psychology to address psychosocial concerns of NIMHANS' students and residents during the lockdown. Faculty volunteers offer brief, low-intensity emotional support via telephone and other electronic modes.
- Casualty and short stay wards have been de-congested, and vacant beds in other wards utilised as required.
- Continuum of Care Programme for Psychiatry has been implemented to guide and track patients over time through an array of mental health services. A total of 541 calls were made and 293 patients contacted last week, in accordance with the KMC guidelines for teleconsultation.
- Adequate quantity of Personal Protection Equipment (PPE), masks, sanitizers, handheld thermometers, etc., are being procured and provided to the designated places.
- Emergency Services are functioning 24 x 7 without interruption. The services have been enhanced by posting additional staff and residents for better triaging and reducing congestion.
- Laboratory and diagnostic/imaging services continue to function, as any services related to the national effort to mitigate COVID-19.
- Inter-departmental services like ECT to be continued/stopped as per the joint decision of all stake holder departments.



Continuum of Care Programme for Psychiatry

- Staff members living outside the campus are instructed to travel to work in their personal vehicles, and compulsorily carry their office-issued identity cards.
- Canteen has been closed until further notice. The mess in hostel (Kabini) is operating on a cash and carry basis, for staff and students not residing in the hostel. All students are encouraged to take away food and avoid dining in large groups.
- Cleaning of surfaces regularly, followed by disinfection, is being practiced in all areas/sections of the hospital.
- Hygiene measures have been effectively implemented across all the departments and sections as per the prescribed guidelines.
- The Heads of Clinical Departments are instructed to minimise the movement of residents to different wards, where feasible.
- All seminars/workshops/conferences have been postponed indefinitely. Departmental teaching programmes to be conducted using Zoom Video Communications or other tele services to ensure training needs and attendance are met.
- The Heads of the Departments may permit students living outside campus to work from home. All heads of the departments must ensure that at least 50% of their staff is available at work at all times.
- Face-recognition method has been introduced to register attendance instead of contact-based biometric system to prevent the spread of Coronavirus.
- Disciplinary action to be taken against any employee spreading false information with respect to COVID-19, under the Epidemic Diseases Act, 1897.



ACTION TIMELINE

23-03-2020	First edition of NIMHANS Bulletin, under the theme "COVID-19: Breaking the Chain, Flattening the Curve", brought out.
28-03-2020	COVID-19 national helpline for psychosocial support and mental health services launched.
30-03-2020	Second issue of NIMHANS Bulletin released.
01-04-2020	Summer vacation for faculty, scheduled to commence from 15-04-2020, cancelled in view of the lockdown and exigencies of the Institute services.
03-04-2020	Guidelines issued for effective implementation of continuum of care programme for psychiatry. Webinar on the Telemedicine Practice Guidelines, notified by the Union Ministry of Health and Family Welfare, by Dr. Suresh Bada Math, Head of Forensic Psychiatry Services.
04-04-2020	COVID-19 samples testing started at NIMHANS, following approval from ICMR.
06-04-2020	Third issue of NIMHANS Bulletin released.
07-04-2020	Online guided yoga practice sessions for stress management during COVID-19 crisis started.
09-04-2020	AICCRCOG SZ and Indian Psychiatric Society seminar on Perinatal Mental Health & COVID-19 by Dr. Prabha S. Chandra, Prof. of Psychiatry.
11-04-2020	Webinar on Mental Health Issues during COVID-19 Pandemic & TOT for providing Mental Health Support to Migrant Workers conducted.
13-04-2020	Teleconsultation for the follow-up of neurology patients initiated.

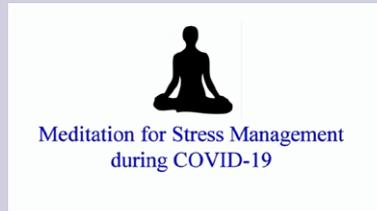
e-surveillance app on the anvil

The Center for Public Health, NIMHANS is piloting an e-surveillance model for apartments, gated communities and residential societies to quantify and self-monitor risk for transmission of COVID-19 at the individual and society level. It seeks to allay apprehension, monitor change in risk levels every 14 days, provide recommendations to reduce risk and assess effectiveness of interventions.

A secured web-based self-report form collects information regarding probability of being infected, probability of infecting others and extent of personal protection behavior.

An inbuilt algorithm calculates risk scores and overall transmission risk (low, moderate and high) for an individual and the society. This people-driven strategy would attempt to create people driven, tightly monitored infection free zones in the society, hereby reducing load on the health system.

Yoga and meditation for stress management



<https://www.youtube.com/watch?v=5wr4hq-4HQk>



<https://www.youtube.com/watch?v=NkWbaBYabwo>

Addressing social stigma associated with COVID-19



https://www.youtube.com/watch?v=1GCv8_BIWey



<https://www.youtube.com/watch?v=ca0gl2C3SVI&t=8s>

Taking care of mental health during the stay-in



<https://www.youtube.com/watch?v=uHB3WJsLJ8s>



https://www.youtube.com/watch?v=GPwn_e9iuvq

Together we can fight Coronavirus

For further information:

Call **24/7** Toll-free Helpline Number **104** and **080-22208541** or
Union Ministry of Health, Govt. of India **24/7** Control Room Number
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