



INDIA'S NATIONAL NEWSPAPER SINCE 1878

on Sunday



Four militants killed, building damaged in south Kashmir's Kulgam
page 6



Uddhav warns of action against those spreading divisive messages
page 6



Shah Rukh Khan offers his office for BMC quarantine facility
page 7

Pro-European centrist Keir Starmer is the new leader of Labour party
page 8



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The Financial Action Task Force (FATF) is an inter-governmental organisation established to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system. It was formed in 1989 by the G7 Summit which was held in Paris. The FATF is really a policy-making body that works with governments to bring about national legislation and regulatory reforms in these areas.

Officially called the "Non-Cooperative Countries or Territories (NCCTs), the FATF Blacklist is a list of countries which the FATF considers to be non-cooperative in the international fight against terrorist financing and money laundering. This list is regularly updated, with countries being either deleted off the list of new countries being added to the list. It is to be noted that some names are on the list not because of their non-cooperative stance towards fighting this menace, but because they lack the necessary infrastructure and mechanisms to engage in this fight.

FATF Countries (FATF Members)

Currently, there are 38 member countries in the FATF. India is a member of the organisation since June 2010. It had earlier acquired 'Observer' status at FATF in 2006.

FATF Observers are two in number, namely, Saudi Arabia and Indonesia. There are many other Observer organisations and Associate Members.

Verdict caused reservations: Qureshi

SUHASINI HAIDAR
NEW DELHI
Faced with strong criticism from the United States and a possible threat of India raising the case at the Financial Action Task Force (FATF), Pakistan on Saturday said the acquittal of Omar Ahmed Sheikh Saeed (Omar Sheikh) and three others for the murder of American journalist Daniel Pearl will be appealed.
On Thursday, the Sindh province court pronounced on Omar Sheikh's appeal of his 2002 conviction for the kidnapping and brutal murder of Pearl that year, saying the prosecution had failed to produce "strong unim-

peachable corroborative evidence" in the case. The U.S. State Department said the verdict was an "affront to victims of terror everywhere". Secretary of State Mike Pompeo tweeted that the U.S. would continue to demand justice for Pearl's murder. "This decision caused reservations," Pakistan Foreign Minister Shah Mahmood Qureshi said on Saturday. The U.S.'s concerns were "natural", he noted. "The Sindh Home Department has decided to detain the accused for 90 days under the Public Safety Act," he said.

CONTINUED ON PAGE 6



Taking precautions: Policemen in protective gear deployed at the Salem Government Hospital on the 11th day of the nationwide lockdown on Saturday. *E. LAKSHMI NARAYANAN

TO TWEAK CANCER TREATMENTS

They are switching patients to less aggressive therapies

YVOTI SHELAR
MUMBAI
The COVID-19 outbreak has posed a unique challenge for oncology experts across the country - to balance the higher risk of exposure to the virus on account of the treatments and the risk of progression of cancer in their patients. To tackle this, oncologists are switching patients to less aggressive therapies, postponing surgeries where possible and adopting an individualised treatment approach for each patient. Since February, when the SARS-CoV-2 virus had found its way to India, Tata Memorial Hospital (TMH) in Mum-



bai began decreasing the intensity of chemotherapy in cases where it was possible. "Intensive cancer therapies result in decreased blood count, more immunosuppression and often require blood platelet transfusions,"

Data from China

Dr. Banavali, also the director of academics at the centre, said they relied on data from China, which showed a high mortality rate due to COVID-19 in cancer patients on active treatment. "We don't know if it will affect the cancer outcome in the long run. But we have to look at what is more harmful in the present scenario."

CONTINUED ON PAGE 6

Two deaths in T.N., both with link to Delhi event

Man, 51, from Villupuram and woman, 53, latest victims

SPECIAL CORRESPONDENT CHENNAI

Two persons - who had tested positive for coronavirus disease (COVID-19) and were undergoing treatment in Villupuram and Theni districts - died on Saturday. With this, Tamil Nadu has recorded three deaths due to the pandemic in the last two weeks.



A street in Chennai's Triplicane cordoned off on Saturday. *S.R. RAGHUNATHAN

A 51-year-old man, a participant in the Tablighi Jamaat conference at Nizamuddin, Delhi, had tested positive for COVID-19 and was undergo-

ing treatment at the Government Villupuram Medical College Hospital. His condition worsened on Friday

He died at 7.44 a.m. A 53-year-old woman died at the Government Theni Medical College Hospital at 2.25 p.m. She too had developed breathlessness, the Department of Health and Family Welfare confirmed in a statement.

The woman's husband and son had travelled to Delhi. Her husband had tested positive for SARS-CoV-2, Health Secretary Beela Rajesh said on Saturday.

The State's first COVID-19 death was on March 25.

Shops selling essentials to shut by 1 p.m.: CM

'Avoid religious congregations'

STAFF REPORTER CHENNAI

Chief Minister Edappadi K. Palaniswami on Saturday announced that shops selling essential items would stay open only between 6 a.m. and 1 p.m. from Sunday.

He said that all markets should strictly follow the prescribed physical distancing norms and avoid any type of religious congregation.

In an official release, Mr. Palaniswami said that the State government held consultations with Christian,

Muslim, Hindu, Jain and Sikh religious leaders in various districts. At the State level, the meeting was chaired by the Chief Secretary to underline the importance of physical distancing. Taking cognisance of how Muslims were being blamed for the spread of COVID-19, the CM underlined that the virus did not discriminate between people on the basis of religion or caste and advised people to look at the problem through the prism of religion.

CONTINUED ON PAGE 3

Grounding of planes affects IMD's weather data supply

Data relayed from aircraft on temperature and wind speed are used in dynamical models

JACOB KOSHY NEW DELHI

The grounding of the country's civilian aircraft has strangled a key source of weather data that the India Meteorological Department (IMD) uses for its forecasts.

Officials, however, clarified that India's annual monsoon forecast system was on track, with the first forecast scheduled to be issued in mid-April.

Aircraft relay data about temperature and wind speed in the upper atmosphere to meteorological agencies the world over and this is used in the dynamical models, the ones which are run on super computers and relied on to



From the skies: The inputs sent by aircraft are important as they determine the initial conditions. *SHANKER CHAKRAVARTY

give weather forecasts three days, or even two weeks in advance.

"Inputs from aircraft are important for the dynamical

models as they determine the initial conditions for these models," D.S. Pai, Chief Forecaster, IMD Pune, told *The Hindu*.

"However, for the monsoon forecast, which is a long-term forecast, this isn't significantly affected."

Beginning mid-March, India began restricting incoming international flights into the country and by March 24 imposed a total shutdown on domestic air travel as well.

Traditional system

This year, the IMD will likely rely on its traditional statistical forecast system - the workhorse, developed on the basis of historical data.

India had begun to move away from this system and started to rely on its dynamical models as it better captures developing changes in

the atmosphere. However, India's dynamical models are still not as adept as meteorologists want them to be, for warning of a drought or extreme changes in monsoon rainfall.

That, and limited data from aircraft as well as a general decline in land-based information because of a shortage of manpower to send observations, are forcing the agency's hand.

"We need multiple observations from weather stations from all parts of the country," said Madhavan Rajeevan, Secretary, Ministry of Earth Sciences (MoES).

CONTINUED ON PAGE 6

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FROM PAGE ONE

Shops selling essentials to shut by 1 p.m., says CM



All markets should strictly follow the prescribed physical distancing norms. - M. MOORTHY

"Infectious diseases such as these can affect anyone. People are advised to treat COVID-19 patients and their families with kindness and care," said Mr. Palaniswami.

The community leaders should cooperate in ensuring that COVID-19 patients or those who had come in contact with them are isolated in their homes or in government-identified centres under the supervision of the government, he added.

Private hospitals
Mr. Palaniswami said he had instructed district collectors to ensure the reopening of private hospitals. "Private hospitals have been advised to treat COVID-19 patients without discrimination and utmost care. They will also make vehicles available to bring patients," he said, adding that select private hospitals had been identified to treat COVID-19 patients.

The notified private hospitals for COVID-19 treatment would be allowed to take in patients who wished to get treated in private facilities. He further said that those

Private hospitals have been advised to treat COVID-19 patients without discrimination and utmost care. They will also make vehicles available to bring patients

who tested negative should be immediately sent home or to isolation facilities.

Daily needs
The Chief Minister also announced that COVID-19 patients and families who may be suffering mental health issues due to self-isolation would be given access to psychologists via mobile applications.

"The daily needs of isolated families will be taken care of by the State government and essentials will be delivered to their homes," he said.

Also, isolation wards could be created in schools and colleges owned and run by religious community leaders. He said that NGO workers had been recruited to assist in providing essential products to senior citizens.

74 new cases take Tamil Nadu's total to 485

All but one are linked to a conference held by Tablighi Jamaat at Nizamuddin in Delhi

SPECIAL CORRESPONDENT
CHENNAI

Tamil Nadu's COVID-19 count went up to 485 on Saturday with another 74 persons - 73 of them connected to the Tablighi Jamaat conference at Nizamuddin, Delhi - testing positive.

While 73 cases include those who had travelled to Delhi and their primary contacts, the remaining person is a man from Chennai.

Of the 73 persons, four were contacts of those who had travelled to Delhi and tested positive. A woman from Chennai, a woman and a man from Namakkal and a woman from Theni - all contacts - have tested positive.

The other participants - all participants in the conference - were from the following districts: 18 from Ranipet, 17 from Tiruchi, 10 from Tiruvallur, five from Chennai, three from Cuddalore, two each from Pudukkottai, Karur, Madurai, Tiruppur and Vellore, and one each from Namakkal, Perambalur, Salem, Theni, Tirunelveli and Villupuram.

COVID-19 in T.N. | A tracker, across parameters, on how the pandemic has impacted the State so far

	Until March 28	March 29	March 30	March 31	April 1	April 2	April 3	April 4	Total
Cases reported	42	8	17	57	110	75	0	74	485
Recovered and discharged	2	3	1	0	0	1	0	1	8
Deceased	1	0	0	0	0	0	0	2	3

Monitoring*	Capacity*	Testing*
Persons screened at airports	Beds in isolation wards	Samples collected
Persons under home quarantine#	ICU Ventilators	Tested positive
Persons in isolation wards in hospitals		Tested negative
Persons in quarantine facilities		Under process

*Status as on date; #Includes only Health and Family Welfare Department figures. People under home quarantine as per Bureau of Immigration advisory not included.

With this, the number of persons who have tested positive for COVID-19 in the state has increased from 364 to 437.

Of the 1,200 persons who attended the conference from Tamil Nadu and have been traced, samples were lifted from 1,097. Details on the exact number of persons who attended the conference and tracked would be provided soon, Health Secretary Beela Rajesh said.

She added that samples were lifted from another 43 patients with Severe Acute Respiratory Infection (SARI). "We are closely monitoring all SARI patients. We will come up with guidelines in a day or two on testing," she said.

Study to be taken up
With the emergence of a large cluster of COVID-19 cases from one source, the Health department has roped in the National Institute of Epidemiology in the city to take up an epidemiological study immediately. The institute has 48 community health epidemiology post graduates who are involved in the study, Dr. Rajesh said. "We have got a large number of cases from a single source. The study will look at how the disease is spreading," she explained.

On the ongoing containment plans, she said so far, a population of 29,63,623 and 7,23,491 households had been surveyed. A total of 11,270 field workers were engaged in the containment plan.

As on date, Chennai had the most number of COVID-19 patients - 88. Dindigul, with 43 patients, came next, followed by Tirunelveli and Erode with 37 and 32 patients, respectively. Thirty-one districts had COVID-19 patients, according to details in the bulletin issued by the Directorate of Public Health and Preventive Medicine.

A total of 1,681 persons were admitted to isolation wards of hospitals in the State. Another 102 passengers from highly affected countries were in quarantine facilities. A total of 90,541 persons were under home quarantine. Of the total 4,248 samples tested till date, 407 were under process. Eight COVID-19 patients have been discharged so far.



We are monitoring all patients with Severe Acute Respiratory Infection. We will draft guidelines for testing soon
BEELA RAJESH
Health Secretary

State has ordered 1 lakh rapid test kits, says Health Minister

Private hospitals asked to reserve 25% of their beds for isolation facilities: Vijayabaskar

SPECIAL CORRESPONDENT
CHENNAI

The State has placed orders for 1 lakh COVID-19 rapid test kits through the Tamil Nadu Medical Services Corporation (TNMSC), Health Minister C. Vijayabaskar has said.

"We already have 17 testing facilities in Tamil Nadu - 11 in the government sector and six in the private sector. The government is aiming to set up a testing facility in

each district. We are also working on providing RT-PCR (Real Time-Polymerase Chain Reaction) equipment to districts. As per the Chief Minister's instructions on rapid testing, we have placed orders for 1 lakh rapid test kits through TNMSC," he told reporters on Saturday. The aim was to speed up testing, he added.

The Minister, along with C. Syendra Babu, Director

General of Police, Tamil Nadu Fire and Rescue Services, inspected disinfection work at the Government Royapettah Hospital. While government hospitals had been notified as COVID-19 hospitals, he said private hospitals had been asked to reserve 25% of their beds for isolation facilities. Accordingly, Sri Ramachandra Medical College had come forward to set up a facility with 1,500 beds. MIOT

Hospital had volunteered to set up a 500-bed facility in a separate block, and the Saveetha Medical College Hospital was also planning to set up a facility, the Health Minister said.

TV in isolation wards
The government Order has been issued, specifying a list of private hospitals that have been approved by the government to have COVID-19

management facilities in each district, he added.

The Minister said television sets were being installed in the isolation wards to keep patients engaged and motivated. The patients could watch entertainment channels in these wards. Nutritional food was being provided five times a day, Dr. Vijayabaskar said.

The Fire and Rescue Services personnel were taking

up massive disinfection work in public places and at government hospitals where COVID-19 patients had been admitted. They were taking up disinfection work in around 4,500 places across the State on a war footing, he said. "When done manually, it may require more workers and take a long time. But they are covering entire campuses in one or two hours," the Minister said.

IN BRIEF

'Serious measures needed, not gimmicks'
CHENNAI
Tamil Nadu Congress Committee president K.S. Alagiri urged Prime Minister Narendra Modi to take serious steps to control the spread of COVID-19 instead of resorting to 'gimmicks' during the lockdown. The Prime Minister has asked citizens to light lamps and candles for 9 minutes from 9 p.m. on April 5. "What way is this going to help in controlling the outbreak?" he asked.

Increase the number of testing centres: VCK chief
CHENNAI
Viduthalai Chiruthi Aigal Katchi (VCK) founder Thir. Thirumavalavan on Saturday urged the State government to increase the number of testing centres across Tamil Nadu and rope in private hospitals for the purpose. In a statement, Mr. Thirumavalavan said the State government should increase testing in Tamil Nadu in order to determine the extent of the spread of COVID-19 and prevent the progression of the pandemic from stage 2 to stage 3.

Disburse funds to states immediately: Ramadoss
CHENNAI
PMK founder S. Ramadoss on Saturday said the Centre should immediately disburse the ₹16,000 crore in financial aid that Tamil Nadu had sought to combat COVID-19. Tamil Nadu was one of the worst-affected States, with more than 1 lakh people under quarantine, and the State government was preparing to set up medical facilities to face a significant rise in COVID-19 cases. The Centre had not released any funds to the States and must immediately do so, Dr. Ramadoss said.

people of third gender to get rations
CHENNAI
The State government has announced that as many as 4,022 people of third gender, who do not have a ration card, will still receive 12 kg rice, 1 kg dal and 1 litre cooking oil.

26 private medical colleges, 112 private hospitals can treat COVID-19 patients

SPECIAL CORRESPONDENT CHENNAI
Now, people who test positive for the coronavirus disease (COVID-19) can get treatment in private hospitals across the State. The Health department has notified a district-wise list of 26 private medical colleges, 112 private hospitals where people affected by COVID-19 could avail themselves of treatment at their own expense.

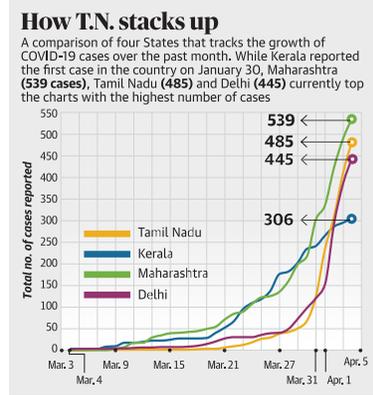
In an order issued on Saturday, the department said that already, the government had notified a list of designated government hospitals for treatment of COVID-19 patients. Treatment is being offered at all government medical college hospitals, district headquarters hospitals and key sub-district hospitals, free-of-cost.

However, some patients had expressed a desire to get treated in private hospitals. Hence, the government has now included private esta-

blishments in the list of hospitals where COVID-19 patients could get treatment. These hospitals have been directed to follow the treatment protocols prescribed by the government from time to time. They should send daily reports on the treatment given to patients to the Director of Public Health and Preventive Medicine.

The list of hospitals would be modified from time to time by the Director of Med-

ical and Rural Health Services, based on the situation. The list includes three private medical colleges in Coimbatore, 12 in Kancheepuram/Chengalpattu, two each in Salem and Tiruvallur and one each in Chennai, Kanniyakumari, Madurai, Tiruchi and Vellore. Of the 112 private hospitals, 9 are in Chennai, six each in Madurai and Coimbatore, four each in Tiruchi and Kancheepuram/Chengalpattu and three in Tiruvallur.



Ruling party's contribution

SPECIAL CORRESPONDENT CHENNAI
The AIADMK on Saturday announced that it would donate ₹1 crore to the Chief Minister's Public Relief Fund (CMPRF) to aid efforts to combat COVID-19.

This would be in addition to the contribution of a month's salary by CM and party co-ordinator Edappadi K. Palaniswami, Deputy CM and coordinator O. Panneerselvam, Ministers, MLAs and MPs. Besides, MPs would earmark ₹1 crore each and MLAs ₹25 lakh from their constituency development funds.

State all set to turn its lights off

No need for alarm regarding grid stability, say officials

T. RAMAKRISHNAN CHENNAI
Tamil Nadu is all set for a smooth implementation of the nine-minute-long 'lights-off' event on Sunday night, officials have said.

In the wake of Prime Minister Narendra Modi's call to switch off electric lights at houses for nine minutes from 9 p.m. on Sunday, senior officials of the Tamil Nadu Generation and Distribution Corporation and the Tamil Nadu Transmission Corporation - are of the view that there is no need to assume that other electrical appliances also have to be switched off. There is no bar to their use, according to the authorities.

A senior official of the Nuclear Power Corporation of India suggested that, to be on the safe side, ceiling fans should be used for 15 minutes from 8.55 p.m. till 9.10 p.m.

At the all-India level, the reduction in power demand is expected to be in the order of 12,000 megawatts

it is within each regional or State grid's fluctuating efficiency, another official clarified. On Friday evening (at 6.55 p.m.), the peak demand of the State was 11,227 MW.

As for issues concerning grid stability in Tamil Nadu, a top official felt that there was no need for alarm. Even the question of resorting to 'islanding' - a process by which a State separates itself from its regional grid in times of grid crash - does not arise.

Notwithstanding the assurances of the authorities, M.G. Devasahayam, civil society activist and former chairman of the now dissolved Haryana State Electricity Board, was of the view that while there was no harm in people lighting bulbs to express solidarity with those working on alleviating the impact of COVID-19, the 'lights-off' event carried the "risk of causing grid collapse". It would not serve the public interest, he contended.

Tangedco's plea to public

SPECIAL CORRESPONDENT CHENNAI
The Tamil Nadu Generation and Distribution Corporation (Tangedco) has urged people not to panic about switching off lights on Sunday night.

With Prime Minister Narendra Modi calling on people across the country to switch off their lights for nine minutes from 9 p.m. on Sunday to show their solidarity with those battling the COVID-19 crisis, Tangedco has advised domestic consumers to only switch off their lights and operate other electrical appliances during those nine minutes.

In a press release, Tangedco said all precautionary measures had been taken to "face any power situation" on Sunday.

The senior officials and staff of the operation and maintenance departments across the State have been asked to be available on Sunday for immediately addressing any electricity-related complaints, a press release said.

Healthcare providers try to source PPE on their own, alumni chip in

'Steady availability and quality of equipment still a concern'

SERENA JOSEPHINE M. CHENNAI
On March 29, the State recorded its first positive case of the coronavirus disease (COVID-19) in a healthcare provider - a 29-year-old railway doctor. This has generated the need for providing adequate safety gear not only to the healthcare providers in the front line of COVID-19 management but also to those posted in outpatient wards, in order to reduce the risk of infection.

While the State government has been maintaining that Tamil Nadu has adequate Personal Protective Equipment (PPE), N95 masks and triple-layer masks for its healthcare providers, a section of doctors, postgraduates and interns of a number of government hospitals have been finding ways to source the kits on their own. In some institutions, the alumni have chipped in, and are trying to source the kits.

"One group of specialists of a government medical college hospital placed orders for PPE using their own money as they are on the front line of COVID-19 care

and were not willing to take the risk. In this situation, the PPE is sold at exorbitant prices, but still, they went ahead and purchased them," said a doctor.

Inquiries with a number of doctors, PGs and interns found that while the availability of PPE in many of the isolation wards of government hospitals was better than before, much more improvement was needed in terms of steady availability and quality.

"In fact, those posted in the casualty and outpatient departments still do not have access to most of the safety gear. Many of us have purchased masks on our own. It is important to provide PPE kits even to those posted in OP as they are also at risk of infection and could end up transmitting infection to patients," another doctor said.

"The PPE supplied to most of the doctors and staff posted at isolation wards are similar to the HIV kits. This will not provide the much-needed protection from COVID-19," he added.

Another government

doctor said the government could at least get units to manufacture kits similar to the "hazmat" suits. Alumni of a number of government medical colleges were trying to do their bit. "We have pooled in money for about 250 to 300 PPE for PGs, and also for the incoming interns. The government should encourage factories such as those in Tiruppur to manufacture the kits by providing raw materials," an alumnus said. Another senior doctor said that they tried to get aprons, masks and shoe covers for doctors posted in OP but these were out of stock in most places. "It is important that our healthcare providers are provided adequate protection as they are on the front line of tackling COVID-19," he said.

Officials of the Health department said Tamil Nadu Medical Services Corporation had taken over the supply of PPE and N95 masks to ensure daily distribution to all hospitals from its warehouses. Every hospital has been asked to take daily stock instead of ad hoc supplies.

Violations of curfew cross 65,000-mark

SPECIAL CORRESPONDENT CHENNAI
As many as 65,194 instances of violation of the COVID-19 curfew have been reported in the State so far.

The State has been under a lockdown since March 24, after the authorities promulgated prohibitory orders under Section 144 of the Code of Criminal Procedure, prohibiting assembly of more than five persons and restricting movement of roads.

"In fact, those posted in the casualty and outpatient departments still do not have access to most of the safety gear. Many of us have purchased masks on our own. It is important to provide PPE kits even to those posted in OP as they are also at risk of infection and could end up transmitting infection to patients," another doctor said.

"The PPE supplied to most of the doctors and staff posted at isolation wards are similar to the HIV kits. This will not provide the much-needed protection from COVID-19," he added.

Another government

What measures will you suggest for children with special needs to tackle the COVID pandemic? Conservancy workers are the unsung heroes of our society. Do you agree? What measures will you suggest as the Corporation Chairman for improving their status and job conditions?

Sensitising parents of children with special needs

These are testing times for every one of us, especially for children with special needs. Paediatric occupational therapists are allied health professionals who focus on their resumption of age-appropriate functions (occupation), be it eating, drinking, sleeping, talking or playing. During these challenging times, our children with special needs are more likely to be disorganised because of the sudden halt of their routines. A change in their routine leads to deprived stimulus, which might hamper their development. This may cause anxiety and distress even for the parents who may run out of ideas.



Dr. B. BALAJI
Senior Occupational Therapist
COVID-19

Self-engagement is always a concern for children with autism, slow learners and those who have praxis issues, since doing any new task is a bother. So, parents are encouraged to facilitate engagement in a more therapeutic way, using home resources.

The following are some of the suggestions to be incorporated along with your given programme:

Hand hygiene is of paramount importance during these days, but it is extremely challenging for our children to continue their morning chores without any fuss even if they don't have to go out.

Explaining the current situation in short, simple and in clear phrases to nonverbal children with autism helps them reduce unwanted anxious behaviour and facilitates the desired behaviour; this technique is called social stories. A social story makes them ready to anticipate the day's new schedule and makes them to acclimatise it imaginatively. Morning chores such as brushing the teeth, toilet, and bathing can be facilitated through modelling, physical cues, verbal prompts and including various positive reinforcements over a period of time, since these can well become part of their ritual.

Sensory stimuli
Allowing children to observe the kitchen during meal preparation gives those rich sensory stimuli through visual, touch, olfactory (smell), and gustatory (taste) inputs. Precautionary measures for hot, sharp objects have to be factored in. Mothers can teach children with real objects in more real life situations like naming, identifying vegetables, fruits, colours, feel different textures of cereals, and smell various spices.

This can be followed by food play/ messy play during their lunch time to desensitise touch, smell, and taste, visual over responses. Avoid showing the child a mobile phone while feeding, instead go to the balcony and point to things. Parents can gradually substitute junk foods, with homemade organic and healthy snacks.

Best time for stories
Early evening are the best time for listening to stories from their grandparents or picture book stories which encourages good sitting, listening skills and expressive language. Playing music over speakers or wear noise cancelling headphones helps them to counter auditory over-responsiveness and organises them. Letting loose to make funny movements and shake a bit relaxes them immensely. Dads can take over evening sessions by taking them to the balcony/terrace to water the plants, to encourage loads of sensory motor activity such as running, jumping, hopping, cycling, climbing, balancing, and ball skills. Children who don't have access to terraces can arrange furniture for an obstacle course and climb over/crawl under to do picking and dropping tasks. This will help with the much-needed proprioceptive input. A cotton sari hammock suspended from ceiling hooks can be provided to ensure vestibular inputs so as to calm, and facilitate muscle tone especially for children with tonal imbalance, Down syndrome and Cerebral palsy. Table top activities such as drawing, colouring, pattern writing, grid diagrams, coping different geometric figures and shapes will integrate visual and motor components which are the prerequisites for academics and writing skills.

Sleep hygiene is very essential, so start with a warm bath, followed by warm food, bed time stories, lullabies in a less-distracted, cozy environment to put them to sleep. The above mentioned ideas are general guidelines and not individualised and parents are encouraged to follow their respective Occupational Therapist-given sensory diet for their specific needs.

Wearing gloves and a mask, she cleans the roads every day from 6 a.m to 2 p.m. The civic body provides breakfast and lunch. "Nowadays, when we ask for water many residents ask us to wash our hands before taking the tumbler or bottle. But a few just refuse, fearing that they may contract the virus. This attitude hurts me and my fellow workers," she says.

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During lockdown, she goes out to serve society, and her family

Eswari, a conservancy worker, is her family's sole breadwinner

VIVEK NARAYANAN
CHENNAI



V. Eswari taking time off for breakfast. M. VEDHAN

Despite the risks surrounding the COVID-19 pandemic, V. Eswari, a conservancy worker with the Greater Chennai Corporation, goes out to work every day, and cleans the roads in Nalambar Phase I. She is now the sole breadwinner of her family.

Due to the COVID-19 scare, Ms. Eswari's daughters have been trying to persuade her not to step out. But she is left with no choice, as her two sons and two sons-in-law, all daily wage earners, do not have any work now.

"So my ₹9,000 monthly salary is essential to run the family. Since I am a contract worker, my salary will be cut if I take a day's leave," says Ms. Eswari, while having her

breakfast, sitting on the wheel of a garbage pushcart. To date, she is not very sure about her age. "I must be in my 40s. I have been working with the GCC for the nine years and clearing garbage from the roads. My husband died 10 years ago and after struggling a lot, I managed to get my two daughters married," she says.

Wearing gloves and a mask, she cleans the roads every day from 6 a.m to 2 p.m. The civic body provides breakfast and lunch. "Nowadays, when we ask for water many residents ask us to wash our hands before taking the tumbler or bottle. But a few just refuse, fearing that they may contract the virus. This attitude hurts me and my fellow workers," she says.

Timings
CHENNAI
SUNDAY, APR. 05
RISE 06:03 SET 18:21
RISE 15:47 SET 03:46
MONDAY, APR. 06
RISE 06:02 SET 18:21
RISE 16:47 SET 04:35
TUESDAY, APR. 07
RISE 06:02 SET 18:21
RISE 17:48 SET 05:24

MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY
(Established by MHRD, Govt. of India)
Bhopal-462005 (M.P.) (INDIA)
Ref. MANIT/A&E/MBA/Admn/2020 Date: 03/04/2020
MBA ADMISSION NOTICE
As per previous Advt. No. MANIT/Admn/2020 dt. 28/02/2020, for the Admission of MBA programme, the last date is extended upto 30th April 2020. For details and application form, visit Institute website www.manit.ac.in
DIRECTOR

3 die after consuming after-shave lotion



Tasmac outlets are closed due to lockdown.

The victims could not buy liquor because of the lockdown

SPECIAL CORRESPONDENT

CHENNAI

Three fishermen died in a hospital after reportedly consuming after-shave lotion as a substitute for liquor at Kottapattinam in Pudukottai district on Friday night.

According to sources, M. Hasan Mydeen, 35, P. Anwar Raja, 33, and M. R. Arundhan, 29, of Fishermen Colo-

ny in Kottapattinam, who could not get liquor because of the closure of tasmac outlets in the wake of the lockdown, had reportedly mixed after-shave lotion in a soft drink and consumed it.

A little later Mr. Raja returned home. Mr. Mydeen and Mr. Pandian began vomiting.

On seeing their condition, passers-by rushed them to the Government Hospital at Manamelludi. Mr. Raja too was admitted to the hospital and subsequently, the police arrived.

Mr. Mydeen and Mr. Pandian died without responding to treatment.

The Kottapattinam police have registered a case and are investigating.

Chennai Weather max min
Thiruvallur 37 23
Chennai Airport 35 24
Chennai City 34 24

Chennai Airport Today
34°C A warm and humid afternoon with pleasant night likely. The sky likely to remain partly cloudy over the region.

Chennai Airport Tomorrow
35°C A very warm day lies ahead. Thunder clouds may develop at some parts.

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Tiruvallur's Cobuddy app gets first distress message

Over 200 persons have downloaded the app

SPECIAL CORRESPONDENT

CHENNAI

The Tiruvallur police on Saturday received the first message seeking help on Cobuddy - the platform which includes a mobile app for tracking those quarantined with COVID-19.

In Tiruvallur district, over 500 people are under home quarantine and to track them, the Tiruvallur district police, with NovTag Technologies, launched Cobuddy last week.

Using the platform, the government can track, communicate effectively and eventually coordinate delivery of essentials to the doorsteps of the quarantined persons. "More than 200 persons have downloaded the app. On Saturday, a person from Adyar, whose permanent address is in Tiruvallur, contacted us over the application and said he had throat pain. We referred him to a private hospital in Adyar and alerted the health officials," said P. Aravindan, Superintendent of Police, Tiruvallur.

Mr. Aravindan has requested home quarantined persons in Ti-



Nearly 500 persons are under home quarantine in Tiruvallur.
*B. JOTHI RAMALINGAM

ruvallur district to install the application. "This will help them reach out to us and the doctors and police can help them during emergency," he said.

The application has been aiding the police and health officials to track the quarantined persons. As facial recognition-based attendance is part of the application, the quarantined person cannot leave the phone at home and sneak out as random messages will be sent throughout the day asking him to click photograph as proof of attendance.

Step up testing to detect asymptomatic patients: Stalin

SPECIAL CORRESPONDENT

CHENNAI

DMK President M.K. Stalin said the government should listen to the medical experts and increase RT-PCR as they suspected that there were a large number of asymptomatic patients.

In his message through social media, Mr. Stalin said testing people with overseas travel history alone was not adequate and patients with complaints of fever, cough and breathing difficulties should be subjected to the RT-PCR.

Making a strong case for bringing down the cost for the test, Mr. Stalin said more testing centres should be created besides converting private hospitals to treatment centres for COVID-19.

Mr. Stalin said the people and the government should realise that the disease had proved to be

a social disaster and the government should step up to it that its announcements for relief measures reached the last man in the street.

Adding that the government was refusing to supply disinfectants and personal safety equipment to local bodies because the DMK was in power in the civic bodies, Mr. Stalin said politics should be avoided in the time of calamity. He called upon people to reject those who resort to cheap politics by dragging caste and religion into the issue.

THE HINDU
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OBITUARY & REMEMBRANCE

DEATH
BALAJI
Missing you a lot - The name of unsolicited help Balaji - went on a celestial train on 29th March 2020. Sleep well friend.
SJC friends, Trichy

DEATH
SAD DEMISE
BHANUMATHY VENKATARAMAN
Passed away on 25th March 2020 aged 64 years
A loving wife,
A caring mother,
The driving force to the entire family.
We miss you a lot!!
Deeply mourned by
A V Venkataraman
Bharath, Lalitha, Mia
Vinay, Arthi, Vaibhav.
Phone: +91-98459 95919

DEATH ANNIVERSARIES
IN MEMORY OF MY FATHER
S. VEDAM
Seven years have gone by,
Wish I could roll back the clock.
Miss you so much.
RAVI

Respectful Homage on his THIRTY EIGHTH ANNIVERSARY
EVVENIMALAI PILLAI
Advocate, Tuticorin
In Fond Remembrance to
S. BHANUMUGHAM - Son
S. VENKIMALAI - Grandson
Advocates, Chennai - 600 010

DEATH
SAD DEMISE
Mr. R. Ramamurthy
04/09/1936 - 02/04/2020
S/O Mr. Ramasubbu passed away at Chennai on 2nd April 2020 in the age of 84 yrs. He is mourned by his son R.Ganapathy Subramaniam and daughter-in-law Anulekha and entire family
For further details please contact R.Ganapathy Subramaniam 9840166764

DEATH
In Everlasting Memory
Smt. Lekshmy Ammal
Retd. HM at NKT National Girls Higher Secondary School, Chennai
Attained Sivakaprathi on 24th March 2020 at Chennai.
She was a caring wife, affectionate mother, loving daughter, adorable sister, generous grandmother, exceptional teacher, astute administrator, helpful friend, a compassionate human being & a lifeline to women empowerment. Fondly remembered as "Prema", she was a pillar to our family and connected all our family relations at all times. Her sudden demise has left a void in the lives of her near and dear ones. She will be missed and remembered by family & friends
Deeply mourned by
S. Srinivasa Raghavan (Husband)
S. Balaji Subrahmanyan & Priya (Son & Daughter-in-law)
S. Abhirami Raghavan & Jairam Krishnamurthy (Daughter, Son-in-law & Grandchildren)
Brothers: Ananthakrishnan & Family; Lakshmanan & Family; Shankar Iyer & Family. Phone: 044-28250327, 044-42068118, +91-9444265611. Email: taxman2020@gmail.com

IN MEMORIAM
In Loving Memory of
BHARAT B KAMDAR
Varsha & Suhani Kamdar
Jayendra & Marlene Kamdar
Chandra, Rajni & Sameep Sanghvi

GOVERNMENT OF INDIA (Ministry of Road Transport & Highways) National Highways Authority of India

Project Implementation Unit - Kancheepuram
No. 7/16, Govindarajan Street, Tambaram West, Pincode-600 046, Tel: 044-22262224 E-mail: piu@kanchipuram.nha.org

PUBLIC NOTICE
NHAI/11025/86/2019/RO Chennai/Accl./1355 Dated: 31.03.2020

Revision of User Fee for the year 2020-21 for Tambaram Tindivanam Section of NH - 45 from Km 28,000 to Km 121,000 in the State of Tamil Nadu

The approved revised User fee rates for above mentioned section to be applicable w.e.f. 01.04.2020 to 31.03.2021 are as under:

(A) Revised User fee rates for Pararur Toll Plaza at Km 52,500 of NH-45 from Km 28,000 to Km 74,500

Sl. No.	Category of Vehicle	Fee for single journey (₹)	Fee for return journey within a day (₹)	Fee for monthly pass for 50 single trips journey in a month (₹)	Fee for single journey for the commercial vehicles registered within the district of fee plaza (₹)
1	Car, Jeep, Van or Light Motor Vehicle	60	95	2080	30
2	Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	100	150	3360	50
3	Bus or Truck (Two Axles)	210	315	7045	105
4	Three - Axle Commercial Vehicles	230	345	7685	115
5	Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (Four to Six Axles)	330	495	11045	165
6	Overized Vehicles (Seven or More Axles)	405	605	13450	200

The rates for monthly pass applicable for local personal vehicle shall be Rs.275/- for the year 2020-21.

(B) Revised User fee rates for Athur Toll Plaza at Km:103.5000 of NH-45 from Km 74,500 to Km 121,000

Sl. No.	Category of Vehicle	Fee for single journey (₹)	Fee for return journey within a day (₹)	Fee for monthly pass for 50 single trips journey in a month (₹)	Fee for single journey for the commercial vehicles registered within the district of fee plaza (₹)
1	Car, Jeep, Van or Light Motor Vehicle	60	85	1920	30
2	Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	95	140	3100	45
3	Bus or Truck (Two Axles)	195	290	6490	95
4	Three - Axle Commercial Vehicles	210	320	7080	105
5	Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (Four to Six Axles)	305	460	10180	155
6	Overized Vehicles (Seven or More Axles)	370	560	12395	185

The rates for monthly pass applicable for local personal vehicle shall be Rs. 275/- for the year 2020-21.

PROJECT DIRECTOR, NHAI, PIU - Kancheepuram.
BUILDING A NATION, NOT JUST ROADS

GOVERNMENT OF INDIA (Ministry of Road Transport & Highways) National Highways Authority of India

Project Implementation Unit - Kancheepuram
No. 7/16, Govindarajan Street, Tambaram West, Pincode-600 046, Tel: 044-22262224 E-mail: piu@kanchipuram.nha.org

PUBLIC NOTICE
NHAI/11025/86/2019/RO Chennai/Accl./1356 Dated: 31.03.2020

Revision of User Fee for the year 2020-21 for Walajahpet - Poonamallee Section of NH - 4 from Km 106,800 to Km 13,800 in the State of Tamil Nadu

The approved revised User fee rates for above mentioned section to be applicable w.e.f. 01.04.2020 to 31.03.2021 are as under:

(A) Revised User fee rates for Nemili Toll Plaza, Near Sriperumpudur at Km 37,800 of NH-4 for a length of 46,500 Km:

Sl. No.	Category of Vehicle	Fee for single journey (₹)	Fee for return journey within a day (₹)	Fee for monthly pass for 50 single trips journey in a month (₹)	Fee for single journey for the commercial vehicles registered within the district of fee plaza (₹)
1	Car, Jeep, Van or Light Motor Vehicle	50	75	1710	25
2	Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	85	125	2760	40
3	Bus or Truck (Two Axles)	175	260	5780	85
4	Three - Axle Commercial Vehicles	190	285	6310	95
5	Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (Four to Six Axles)	270	410	9070	135
6	Overized Vehicles (Seven or More Axles)	330	495	11040	165

The rates for monthly pass applicable for local personal vehicle shall be Rs. 275/- for the year 2020-21.

(B) Revised User fee rates for Chennasamudram Toll Plaza, Near Walajahpet at Km:104.900 of NH-4 for a length of 46,500 Km:

Sl. No.	Category of Vehicle	Fee for single journey (₹)	Fee for return journey within a day (₹)	Fee for monthly pass for 50 single trips journey in a month (₹)	Fee for single journey for the commercial vehicles registered within the district of fee plaza (₹)
1	Car, Jeep, Van or Light Motor Vehicle	45	65	1435	20
2	Light Commercial Vehicle, Light Goods Vehicle or Mini Bus	70	105	2315	35
3	Bus or Truck (Two Axles)	145	220	4850	75
4	Three - Axle Commercial Vehicles	160	240	5290	80
5	Heavy Construction Machinery (HCM) or Earth Moving Equipment (EME) or Multi Axle Vehicle (MAV) (Four to Six Axles)	230	340	7605	115
6	Overized Vehicles (Seven or More Axles)	280	415	9260	140

The rates for monthly pass applicable for local personal vehicle shall be Rs. 275/- for the year 2020-21.
PROJECT DIRECTOR, NHAI, PIU - Kancheepuram.
BUILDING A NATION, NOT JUST ROADS

FROM PAGE ONE

42% of patients between 20 & 40 years

"About 1,023 positive cases linked to the organisation can be traced to 17 States. We couldn't manage and understand this event and the cases increased due to this," said Mr. Agarwal. Nearly 22,000 contacts related to the religious event had been quarantined. About 75,000 had so far been tested, an ICMR spokesperson at the press briefing said. "We are gradually increasing our testing capacity. Our capacity is now nearly 10,000 tests per day."

The Health Ministry has also revised its advisory on the use of masks. The new guidelines accept the role of "face covers." Unlike the surgical masks and respirator masks used in hospitals, "face covers" are made and mostly of cotton and could be re-used provided they were properly washed and dried. "People who are not suffering from medical conditions or having breathing difficulties may use the handmade reusable face cover, particularly when they step out of their house. This will help in protecting the community at large," a note from the Ministry said. Last week, the office of India's Principal Scientific Adviser made public a manual that explained how such face covers could be made and recommended that they be widely used. While the general recommendation by the WHO has been to avoid masks, as they could deplete supplies for health personnel - option has changed over concerns that the infection had spread widely and people were increasingly likely to catch it when outside.

Virus drives oncologists to tweak cancer treatments

An analysis of patients in China published in *The Lancet Oncology* in March stated that patients with cancer might have a higher risk of COVID-19 than individuals without cancer. "Patients with cancer had poorer outcomes from COVID-19, providing a timely reminder to physicians that more intensive attention should be paid to patients with cancer, in case of rapid deterioration," the article's authors wrote, further suggesting "intentional postponing of adjuvant chemotherapy or elective surgery for stable cancers in endemic areas". "Data from China has shown that mortality in cancer patients was two times higher as compared to general patients with COVID-19," observed Ashok Vaid, chairman, medical and haematology oncology, M. danta Hospital, Chennai. "Italy had reported a 20% mortality in cancer patients. We have to use this data for our learning. We are trying to make multiple interventions on case to case basis.

For example, we are switching elderly cancer patients on oral therapies instead of intravenous, opting for milder therapies and also reducing their hospital visits. But it all differs on a case to case basis, based on the biology of cancer," he said. Mumbai-based surgical oncologist Vinay Deshmans said his team had been postponing surgeries if possible and were operating only on cases where surgery couldn't wait. "I am also advising three weekly therapies instead of weekly therapies. The idea is to not have a rigid outlook and treat each case individualistically," he said. The lockdown has already resulted in reduced patient footfall, which are not disrupting the ongoing treatments," said Amal Katakata, director of Dr. B. Borooah Cancer Institute, Guwahati. "But we are modifying the treatment protocol in some cases so that the risk of COVID-19 is mitigated as much as possible," Dr. Katakata added.

Grounding of planes hits weather data supply

"Now that's been reduced. But because weather services are an essential service we are working with reduced manpower," he added. The IMD is a subsidiary of the MoES. A major factor for gauging the performance of the monsoon is the El Nino, a warming of the ocean waters in the equatorial Pacific Ocean. This data is measured by observations in the sea and via satellite. This data isn't affected so far," Dr. Pai said. The IMD issues its first forecast for the June-September monsoon in April and updates it in June. Aviation-generated data is also helpful to warn of developing thunderstorms or swings in temperatures that often begin at the heights aircraft traverse. "There are mathematical fixes that are used to compensate for this. However, the lack of data for a prolonged period of time is a big loss for calculating weather trends and future climate patterns," the IMD scientist added.

Pak. vows to appeal against acquittal of Omar Sheikh

In another statement, the Imran Khan government said it was "concerned" about the verdict. "Government of Pakistan reiterates its commitment to follow due process under the laws of the country to bring terrorists to task," a statement issued by the Pakistan Information Department said. The Ministry of External Affairs declined to comment on the case. However, diplomats and security officials said the acquittal and Pakistan's subsequent actions would only open a new can of worms in the case of Omar Sheikh, who was arrested for kidnapping and terror in India in 1994. He was released along with Masood Azhar after the IC-814 hijacking. Sheikh, who was believed to have worked closely with

Al Qaeda before and after 9/11, was being investigated for wiring \$100,000 to 9/11 attacker Mohammad Atta. He was in touch with Osama Bin Laden. Former diplomat Vivek Katju said, "Pakistan's approach to terrorism is revealed by the shoddiness with which they prosecuted Omar Sheikh in such a high profile case. Much will depend on how it manages the appeals in the higher courts." Apart from the loopholes, some also raised the questions of a possible link to the current Minister of Interior Brig (retd.) Ijaz Shah, a former IB chief. In 2002, with a manhunt declared for him in the Pearl case, he had reportedly sought refuge with Mr. Shah, and then "surrendered" to him.

PM to brief floor leaders on COVID-19

SPECIAL CORRESPONDENT NEW DELHI

Prime Minister Narendra Modi has called for a meeting of floor leaders of political parties in both Houses of Parliament on April 8 to brief them about COVID-19 outbreak and related issues. The meeting will be held through video-conferencing. The Budget session of Parliament was adjourned on March 23 after an increase in number of COVID-19 positive cases in the country. The Trinamool Congress has said it may give the party a slip. A Trinamool leader said the party had been seeking a discussion in Parliament and an all-party meeting on COVID-19 since early March but to no avail. "Now that the situation has blown up, why are they calling this meeting. It's merely a photo-op," a senior party leader said. The Congress has not taken a call on the issue.

Cong. seeks more aid for States

Rahul asks government to scale up testing rather than 'lighting lamps'

SPECIAL CORRESPONDENT NEW DELHI

The Congress on Saturday said the Union government should empower the State governments by announcing a special economic package of ₹1 lakh crore and release about ₹42,000 crore due as compensation for the goods and services tax (GST). It urged the Reserve Bank of India (RBI) to offer zero interest loans as there have been a lot of problems against the COVID-19 pandemic. Former Congress president Rahul Gandhi asked the government to scale up testing rather than "lighting lamps", while the party criticised the government for not banning export of diagnostic kits until Saturday. "India is simply not testing enough to fight the #Covid19 virus. Making people clap & shining torches in the sky isn't going to solve the problem," Mr. Gandhi tweeted. "Testing & Diagnostics are imperative in fight against



SUPRIYA SHRINATE, Congress spokesperson

#COVID2019! Till 19th April & 24th March, Govt permitted export of Masks, Sanitizers & Ventilators. Even more shocking is the fact that Govt permitted export of Diagnostic equipment till date! Who is weakening the fight," asked Congress chief spokesperson Randeep Surjewala on Twitter with a copy of a government notification attached.

Curbs imposed An April 4 notification of the Commerce Ministry restricted the free export of diagnostic kits. In an online media interaction, Congress spokesperson Supriya Shrinete offered a number of suggestions, including building a consensus instead of making "unilateral

announcements". "We urge the government yet again to create a national consensus by putting in place a structured consultation process between the Centre and the States while formulating our strategy to deal with the COVID-19 outbreak and the collateral damage of life and livelihood. A similar consensus must also be arrived at by involving all political parties in key decision-making at this crucial juncture rather than making just unilateral announcements," the Congress spokesperson said. "The States don't have the same instruments to mobilise funds like the Union government even though the real implementation of the measures announced are being done by the State governments. We strongly urge the Central government to announce a special economic package of at least ₹1 lakh crore for the States to combat the crisis," Ms Shrinete said. The money could be divided on the basis of a State's population. **Delayed payment** "The Centre has delayed payment of GST compensation to the States. Of the ₹48,000 crore pending in GST compensation, only ₹6,195 crore has been released so far. Due to the halt in economic activity, the States are facing a further shortage in GST revenue. Several States, including the BJP-ruled ones, have approached the Central government seeking clearance of their pending tax dues," she said. The Congress urged the RBI, which effected an additional 30% increase in Way and Means Advances (WMA) for the State governments, to make it interest-free.

'Nothing but a cruel joke on the poor'

SPECIAL CORRESPONDENT NEW DELHI

A day after Prime Minister Narendra Modi asked people to switch off electric lights at home and light candles or oil lamps for nine minutes on Sunday, the Centre of Indian Trade Unions (CITU) wrote to him on Saturday to express disappointment. CITU general secretary Tapan Sen, said the workers suffering because of the lockdown to curb the spread of COVID-19, expected some relief from Mr. Modi's Friday address. "The country remains in the dark on the measures that your government is taking to fight the coronavirus, while you called upon the people to put off lights and light candles at 9 p.m. on April 5 to drive away the darkness caused by the coronavirus... It is nothing but a cruel joke on the poor," the letter stated. The CITU urged Mr. Modi to address the demands of trade unions.

U.P. government to expand virus testing

Surveillance has started in districts that have not recorded cases, says State Health Secretary

SPECIAL CORRESPONDENT LUCKNOW

The Uttar Pradesh government has indicated it would expand the spread of testing for COVID-19 in the State, though in small numbers. State Health Principal Secretary Amit Mohan Prasad said the surveillance process had started in those districts that had not recorded any cases yet. Till Friday evening, 24 of 75 districts in the State had recorded positive cases, according to U.P. Directorate of Health Services. With 47 cases across 14



Fever check: The State has eight laboratories testing for COVID-19 with a ninth one in Jhansi waiting for approval.

districts linked to members of the Tablighi Jamaat event in Delhi, the State's overall figure stood at 174 on Friday evening. Mr. Mohan said districts

where there had not been enough testing had been directed to test at least 100 samples of cough, fever, pneumonia cases daily. This would be done across the State, he said. "At this stage, getting people tested as much as possible and as soon as the results come, carrying out immediate aggressive containment and putting them under facility quarantine are the most important tasks," Mr. Prasad said. The State currently has eight laboratories testing for

COVID-19. A ninth one in Jhansi is still waiting for approval. Mr. Prasad also said that the State was going to use rapid testing kits for surveillance soon. **COVID-19** Each district had a dedicated level-1 COVID-19 hospital operating, while three level-3 COVID-19 hospitals were notified and six level-2 COVID-19 hospitals were to be notified, said the official. Uttar Pradesh has so far tested 4,006 samples for COVID-19.

Tablighis asked to get tested within a day

SPECIAL CORRESPONDENT BHUBANESWAR

Odisha Chief Minister Naveen Patnaik on Saturday called upon Tablighi Jamaat returnees to come forward for testing within 24 hours and urged people not to panic but stay watchful to contain the spread of COVID-19. Mr. Patnaik appealed to those who had returned to the State after attending the Jamaat's religious conference in Delhi to call toll free number 104 and follow the advice of the doctors.

Don't spread communal virus, warns Uddhav

CM talks tough on hate speech

SPECIAL CORRESPONDENT MUMBAI

Maharashtra Chief Minister Uddhav Thackeray on Saturday warned of strict action against persons spreading communally divisive messages on social media amidst rising cases of COVID-19. In his address through social media, Mr. Thackeray reiterated that no permission will be granted to religious, political or sporting events in the State until further notice. He added that the COVID-19 lockdown in the State after April 14 will depend upon the compliance by people to the government directives. In an apparent reference to hate speech on social media against a Muslim community in the wake of the

spike in COVID-19 cases linked to Tablighi Jamaat gathering in Delhi, Mr. Thackeray warned of strict action against such persons. "There is another virus of divisiveness apart from the coronavirus. I warn such people that I will ensure that no law will save you," he said. Addressing communalism other than the one without spreading, he said, "We celebrated GudiPadwa and Ramnavmi by staying indoors. I am confident that other communities would do the same." The CM said religious leaders, including maulvis, have been in touch with him, and have asked members of their communities to not venture out.

Modi, Trump talk on fight against virus

PRESS TRUST OF INDIA NEW DELHI Prime Minister Narendra Modi and U.S. President Donald Trump on Saturday held a detailed discussion on the situation arising out of the COVID-19 outbreak and resolved to do a full partnership to fight the pandemic. Mr. Modi tweeted that they held an "extensive" telephonic conversation. "We had a good discussion, and agreed to deploy the full strength of the India-US partnership to fight COVID-19," he posted. Mr. Modi also tweeted that he had a conversation with Brazil's President Jair Bolsonaro on how India and Brazil could join forces against the pandemic.

Two more positive cases from Dharavi

STAFF REPORTER MUMBAI The number of COVID-19 positive cases from Dharavi rose to four on Saturday. A 36-year-old woman, a patient of the same area as the first patient, along with a 48-year-old man from Dharavi's Mukund Nagar, tested positive for the disease. This brings the total to four from the area, excluding a conservancy worker, who also tested positive. Upscale Shivaji Park too reported its first positive case on Saturday. Even as authorities are inspecting a Tablighi Jamaat link to the death of the first COVID-19 patient, the deceased's immediate contacts have tested negative. But, a 30-year-old woman

Hospital seeks details of staff online groups

STAFF REPORTER MUMBAI To "prevent" any "adverse comments or statements" on social media and the spread of fake news by hospital or college staff, the Vardhaman Mahavir College and Saffdarjung Hospital in the capital has asked for names and details of all admins of WhatsApp groups of staff members. The hospital is among those treating COVID-19 patients. "This is required to prevent the spread of fake news, rumours or adverse comments on social media and in the institution you are requested to submit names, mobile numbers, e-mail of all admins of WhatsApp Groups of the hospital staff," an order said.

Mallya case order may get delayed

SPECIAL CORRESPONDENT NEW DELHI

The verdict in the extradition case against fugitive businessman Vijay Mallya by a United Kingdom court may get delayed due to the COVID-19 pandemic, which has so far claimed more than 4,300 lives there. In February, the court heard Mr. Mallya's appeal against the Westminster Magistrates Court's clearance of his extradition in connection with the cases instituted by the CBI and the Enforcement Directorate. A joint team of both agencies was there to assist the prosecution. "After the 14-day, the court reserved the order. It is possible that the pandemic may cause delay in the announcement of the verdict," said an official.

Four militants killed in Kulgam

Operation was the first in the district after 11 months

SPECIAL CORRESPONDENT SRINAGAR

Four militants were killed and a house was damaged in an operation by security forces in south Kashmir's Kulgam on Saturday. Three militants were killed earlier in the day and the body of the fourth was recovered later in the debris of the house, where the militants were holed up, a spokesman in Srinagar said. The police said the militants surrounded by a joint search party of the CRPF, the police and the GRPF in Man Gulla village of Khul Batura area of Kulgam. "The militants were challenged. They opened fire and the exchange of fire resulted in their killing," the police said. However, the locals said the militants were killed in a blast detonated by the security



Battle cry: Jawans rush towards the encounter site at Hardmand Guri village in Manzgam.

J&K parties condemn changes to domicile laws

SPECIAL CORRESPONDENT SRINAGAR The Centre's move to make amendments to Jammu & Kashmir's domicile laws within days of its issuing, drew flak from the regional parties including the National Conference (NC), the Peoples Democratic Party (PDP) and the Peoples Conference (PC), on Saturday. The Home Ministry order late on Friday provides protection to domiciles to "any post" in the government including Group A and Group B, apart from Group D and entry-level non-gazetted government posts. "It's high time people of J&K get to decide the laws that will govern them rather than being subjected to the whims and fancies of the Centre, where orders are issued in the morning and

Lights-off event will not harm grid: Ministry

Arrangements in place to handle variation in demand, it says

SPECIAL CORRESPONDENT
NEW DELHI

India's power grid is likely to come to no harm on account of the mass switching off of electric lights on Sunday, the Power Ministry has said in a statement.

"Some apprehensions have been expressed that this may cause instability in the grid and fluctuation in voltage which may harm the electrical appliances... they are misplaced," the press statement said.

It said the electricity grid was "robust and stable", and adequate arrangements and protocols were in place to handle the variation in demand.

Only residential units
It said the call was not to switch off street lights or computers, television sets, fans, refrigerators and air conditioners. Only lights should be switched off, but not except in hospitals and other essential services such

as public utilities, municipal services, offices, police stations, manufacturing facilities.

To dispel the "deep darkness" that the pandemic had wrought, Prime Minister Narendra Modi on Thursday exhorted Indians to switch off their residential lights at 9 p.m. on Sunday and light candles or flash their phone lights in the following nine minutes.

Power companies say a sudden dip and then a spike in supply could threaten the stability of the grid and may cause some of them to trip.

Power System Operation Corporation (Posoco) Ltd, a public sector company in charge of managing the grid load, said it expected a 12-13 GW (1 gigawatt is 1,000 megawatt) dip and a subse-

quent surge in 17 minutes. (A four-minute window either side of the nine minutes when consumers would be switching off and then relight).

20% down
With the lockdown in force, power suppliers across India are already grappling with a 20% dip in demand. An instability in the grid would wobble the frequency range at which electricity flows and threaten an outage.

In an advisory, Posoco described the anticipated fluctuation in demand as "unprecedented" and would need hydro and gas resources to help the grid retain its stability.

The method of management would be a phased reduction in gas- and hydro generation from 6 p.m. to 8 p.m. at inter-State generating stations and then a ramping up from 9:10 onwards, according to the note.

Power managers primed for a dip and surge

Measures like voltage control and black start will be in place for Sunday's event

M. KALYANARAMAN

The lights-off event planned for Sunday can lead to disruptions in power supply when everyone switches off their lights from 9 p.m. and switches on after nine minutes. Electricity authorities have studied power consumption patterns across India and the share of lighting in it, to come up with a plan to handle the expected dip and surge in consumption.

When everyone switches off their lights, the power plants will be affected. The situation can be compared to a bicycle climbing upward. When the lights go off all at once, it is akin to the cyclist suddenly reaching the peak and continuing to pedal as before during the climb down. The bicycle speed will then ramp up and could lead to the cyclist losing his balance. The voltage in the grid and the frequency will surge. The frequency can be understood as the electrical equivalent of the bicycle's speed.

The cyclist losing his balance is like our power plants



The contingency plans include black start – starting power plants during a black-out.

stopping operation as a result of these sudden changes. If, however, the cyclist anticipates the steepness of the terrain and the cliff, then he can pedal as required.

Electricity authorities have observed consumption patterns across States and concluded that the dip and surge is likely to be of the order of 12 to 14 gigawatts, which is roughly 10% of electricity consumed (load, actually) at any given point in time in India. And the dip and the surge will each happen in two to four minutes.

Different types of power plants have different abilities to handle sudden increase or decrease in load. The control

System Operation Corporation (Posoco) Limited has come up with a strategy.

In India, power consumption hits a low at around 6.10 p.m. This is when everyone has left their offices. Lights are off in offices and not yet on at homes. The sun has not set yet. Fans are probably off, too. After the low, power consumption rises and hits a peak at around 7.20 p.m. It then starts reducing.

BACKGROUNDER

we have on these plants varies. In hydro plants, the water can be stored in dams to the brim and then let down. In coal-fired plants, it would be harder to suddenly reduce or increase their power generation. They take a while. In gas-fired plants, load changes can be much quicker. In nuclear plants, this ability is quite limited. It would be difficult to switch off or load these plants suddenly or quickly. In solar and wind, there is little or no control. The sun and the wind do not obey us at all.

Evening plan
During the evening, when power consumption starts rising after the 6.10 p.m. low, the hydro plants will be powered down by decreasing the water flowing to the turbines and, instead, storing the water in the reservoirs during the evening (after 6 p.m.) when power demand hits a peak. The load will be taken up by other units.

Before lights-out on Sunday, by 8.55 p.m., the thermal generating units such as coal and gas will be powered down to 60% of their capacity. And hydro plants will be powered up to take the

shortfall from thermal plants.

After 8.57 p.m., both types of plants will be powered down as people switch off their lights. Power managers will keep a watch over the frequency. If they reduce the power but the demand is still there and not enough people are switching off their lights, then the frequency will dip too much.

As the lights-out picks up, hydro units will be brought down to less than 10% of the maximum power they can produce. Gas units will be brought down to minimum power.

From 9.05 p.m., the thermal units will start ramping up, and from 9.09 p.m. hydro units will start powering up. After stabilisation, the operation of all types of power plants will be brought to normal.

Operationally, Posoco has asked all senior personnel to be on duty. Contingency plans include black start – starting power plants during a black-out.

(The writer is an independent journalist)

IN BRIEF



No plan yet to resume services, says Railways

The Railways on Saturday said no final decision had been taken on the resumption of train services. The statement comes as reports that the Railways had prepared a plan to resume the services remain suspended because of the 21-day lockdown. "No such plan regarding the resumption of passenger services has been issued," the Railways said.

Doctor couple tested positive turn new parents

A day after a resident doctor and his wife tested positive for COVID-19 at the All India Institute of Medical Science (AIIMS) in the capital, they were blessed with a healthy baby boy on Friday. The child, delivered through a C-section at AIIMS, is doing well, said doctors at the hospital. This is the first case of a COVID-19 positive woman being delivered of a child. There is no evidence of virus transmission in the child.

Advise man dies after police thrash villagers

The family of a 65-year-old Advisi man in Madhya Pradesh has alleged that he was beaten to death by the Dhar police while he was waiting outside a grocery store on Friday. The district administration, however, claimed the senior citizen died of a heart attack after seeing the police. The deceased, Tibu Meda, from Khargone, had gone with his son-in-law Sanjay Meda to Dhar as the shop in his village had run out of supplies. "The police started beating us with bastons without provocation," said Mr. Sanjay Meda.

Fightback



All in: (Clockwise from top) Social workers in Patna packing meals on Saturday for the poor who lost their livelihoods due to the virus outbreak; policemen on vigil outside the apartment complex where the first COVID-19 positive case in Guwahati was detected; and a medical personnel equipping an isolation coach in Ahmedabad.



ICMR issues rule book on 'large outbreaks'

It also released guidelines on the use of rapid antibody testing kits

SPECIAL CORRESPONDENT
NEW DELHI

The Indian Council for Medical Research (ICMR) made public guidelines that detail how the country plans to manage a "large outbreak" as well as guidelines on rapid antibody testing kits.

According to Lav Agrawal, spokesperson, Health Ministry, 30% (about 1,000 positive cases spread across 17 States) of India's total case count is attributable to the Tablighi Jamaat gathering in

Delhi earlier this month.

The plan for large outbreaks, released on Saturday, specifies surveillance for contacts in the identified geographic area.

It also detailed guidelines on the use of rapid antibody testing kits. Unlike the real-time RT-PCR kits that are used to detect an ongoing infection, these kits – within 15 minutes to two hours at the maximum – can say if a person has ever been infected by the virus and gives authorities an estimate of whether there are asymptomatic carriers of the infection in a community.

Knowing the proportion of asymptomatic carriers to positive cases gives an insight into the infectivity of the disease, transmission patterns and helps prepare for the long-term management of the epidemic. Testing negative via an antibody kit doesn't automatically rule out infection and needs to be supplemented by a PCR test, the ICMR guidelines specify.

Hundreds of antibody kit manufacturers have been approved in India in the last week to offer tests, according to the Health Ministry website.

Study lists 69 existing drugs to target novel coronavirus

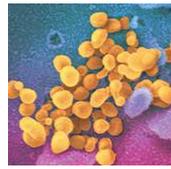
Nearly 100 scientists worldwide collaborated for it

ASWATHI PACHA

In a breathtaking feat, nearly 100 scientists from across the globe worked together to study the genes of the novel coronavirus (SARS-CoV-2) and have published a list of drugs that can be repurposed to treat COVID-19.

The study posted on preprint server bioRxiv on March 27 is yet to be peer-reviewed or published in a scientific journal.

The proteins of the virus must attach to the human proteins to cause the infection. The team studied 26 coronavirus genes that help in the production of these proteins. It also studied human proteins and found 332 SARS-CoV-2 and human protein interactions. The team then listed 67 human proteins that can be targeted by



The novel coronavirus

However, they still need to be further tested," said Mehdi Bouhadad, one of the authors. He is a post-doctoral fellow at the University of California, San Francisco.

Familiar names

The list includes unexpected candidates such as entacapone used to treat Parkinson's disease. Another is the antiviral medication named ribavirin, which was administered to Nipah patients in Kerala during the 2018 outbreak. Chloroquine, an anti-malarial drug, and metformin, used to treat diabetes, are also there.

"The next step is to test these drugs in labs we are collaborating with in New York (Mount Sinai) and Paris (Pasteur Institute), where they have the virus growing," he said.

Bhilwara enforces 'all down curfew'

SPECIAL CORRESPONDENT
JAIPUR

Determined to snap the chain of COVID-19 transmission, authorities in Rajasthan's Bhilwara have now imposed an aggressive 11-day-long "all down curfew" with even essential services being severely curtailed.

The textile city, which had emerged as the State's first hotspot for COVID-19 infections a fortnight ago, appears to have taken the measure of success in containing the spread of the virus, with only

one positive case detected during the last four days, and 17 of 27 infected persons having recovered after treatment.

The containment efforts, which included an indefinite curfew that was imposed on March 20 even before the nationwide lockdown began, had some tangible

results. Nine of the 17 patients were discharged from the Mahatma Gandhi Government Hospital on Friday, followed by two on Saturday,

after multiple tests confirmed their full recovery. The infection had initially spread in the Bhanu Memorial Hospital, a private hospital which has since been sealed.

While all curfew passes issued since March 20, were cancelled and the district's borders sealed, a 3,000-strong police force, along with the home guards and the State Disaster Response Force personnel, were enforcing the curfew which started on Friday.

Shillong dentist writes prescription for liquor

Patient has withdrawal symptoms

RAHUL KARMAKAR
GUWAHATI

To drink or not to drink. This is the subject of a lively debate in Meghalaya's capital Shillong amid the ongoing nationwide lockdown.

A dentist in the city on Friday prescribed two bottles of whiskey to a 65-year-old male patient, advising him not to drink more than two pegs a day.

The doctor cited the case of Kerala in justifying the prescription. He said his patient was suffering from withdrawal symptoms.

"I have advised him to consume alcohol in limited

quantity," he said.

The dentist's prescription coincided with an appeal by the Wine Dealers and Welfare Association in Shillong to Chief Minister Conrad K. Sangma seeking permission to open alcohol outlets across the State with immediate effect. The association said the lockdown had increased the demand for liquor.

The appeal followed the withdrawal of an order by the State government asking bonded warehouses to sell liquor. The order was withdrawn after the Indian Medical Association objected to it.

Khans offer office to help fight virus

SPECIAL CORRESPONDENT
MUMBAI

Actor Shah Rukh and Gauri Khan have offered their personal office to the Brihanmumbai Municipal Corporation (BMC) to help expand their quarantine facility for those afflicted with COVID-19.

The four-storey building, located in Mumbai's Khar area, would be equipped with essentials for quarantined children, women and the elderly. The BMC handle @mybmc tweeted this on Saturday.

This comes two days after the actor had pledged aid to a number of organisations on several fronts.

POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION & RESEARCH, CHANDIGARH
ADMISSION NOTICE No. 05/2020
Online applications are invited for admission to DMRC, MD (Hospital Administration), Master of Public Health (MPH) & Post Graduate Diploma in Public Health Management (PGDHPM) courses for the July 2020 session through computer based test (CBT) to be held at different cities across the Country. Tentative Schedule of related activities is given below:-

Commencement of online Registration and filing of application form on PGIMER, Chandigarh website www.pgimer.edu.in	6 th April, 2020
Closing of online Registration and submission of application form	6 th May, 2020
Computer Based Test (CBT)	7 th June, 2020 (Sunday)

For eligibility criteria, number of seats and other details, applicants are advised to read the prospectus and instructions given therein carefully before starting online registration and filing of application form. The information brochure/prospectus of admission is available on Institute's website i.e. www.pgimer.edu.in. The candidates are requested to visit the PGIMER website regularly for all subsequent changes/update for entrance examination/communicational/academic/contingendum.

REGISTRAR

VIJAYAWADA MUNICIPAL CORPORATION (VMC)
CORRIGENDUM
Tender Notice No. CE-20/VMC/AE/2019-20, Dt.23-03-2020, Dt.04-04-2020
The corrigendum is hereby issued for the two works of tender notices No. CE-20/VMC/AE/2019-20, Dt.23-03-2020 (ID:324908) & CE-21/VMC/AE/2019-20, Dt.30-03-2020 (ID:325058) regarding attachment of images for some of BoQ items.
The detailed corrigendum may be seen in e-procurement portal i.e. tender.apeprocurement.gov.in for works with above IDs.
*Remaining terms and conditions are unaltered
Sd/- XXXXX
CHIEF ENGINEER

NATIONAL COUNCIL OF EDUCATIONAL RESEARCH & TRAINING (NCERT), NEW DELHI
ADMISSION IN TO VARIOUS TEACHER EDUCATION PROGRAMMES OF REGIONAL INSTITUTES OF EDUCATION
The National Council of Educational Research and Training (NCERT), New Delhi is an autonomous organisation set up in 1961 by the Government of India, Ministry of HRD to assist and advise the Central and State Governments on policies and programmes for qualitative improvement in school education and teacher education. The eight constituent units of NCERT, located in different parts of the country, include: (i) RIE, Ajmer; (ii) RIE, Bhopal; (iii) RIE, Bhubaneswar; (iv) RIE, Mysore; (v) NERIE, Shillong; (vi) NIE, New Delhi; (vii) CIET, New Delhi; and (viii) PSCIVE, Bhopal.

Applications are invited on-line from the eligible applicants for admission into various Teacher Education programmes, viz. (i) B.Sc.B.Ed. (4-year), (ii) B.A.B.Ed. (4-year), (iii) M.Sc.Ed. (6-year), (iv) B.Ed. (2-year) and (v) M.Ed. (2-year) run under Regional Institutes of Education. The on-line application form is available w.e.f. 06/04/2020 to 04/05/2020 at <https://cee.ncert.gov.in>. Common Entrance Examination (CEE) will be conducted at various centres across the country on May 24, 2020. For details, visit our URL <https://cee.ncert.gov.in>. For any query contact CEE-2020 Helpdesk phone numbers 0755-2661467/ 0755-2661468 or the email ID cee2020help@gmail.com

S.No.	Important Events	From	To (Last Date)
1.	On-line Registration and Submission of Application Form	06.04.2020	04.05.2020
2.	Downloading Admit Card	12.05.2020	23.05.2020
3.	Date of Common Entrance Examination-2020		24.05.2020
4.	Last date for Submission of Qualifying Examination Marks for Applicants appearing entrance examination for B.Sc.B.Ed. (4-year), B.A.B.Ed. (4-year) and M.Sc.Ed. (6-year)		10.06.2020
5.	Last date for Submission of Qualifying Examination Marks for Applicants appearing entrance examination for B.Ed. and M.Ed.		01.07.2020
6.	Declaration of Results for B.Sc.B.Ed. (4-year), B.A.B.Ed. (4-year) and M.Sc.Ed. (6-year)		05.07.2020
7.	Declaration of Results for B.Ed. and M.Ed.		10.07.2020

Principal
RIE, Bhopal

Americans told to wear face masks

Trump says it is voluntary; Europe sees glimmer of hope as new infections slow in Spain and Italy

AGENCE FRANCE-PRESSE MADRID

Americans on Saturday came to grips with recommendations to wear masks against the coronavirus, while Spain added to hopes that Europe could be turning a corner in the pandemic with a second daily drop in deaths. Since COVID-19 emerged late last year, more than 1.1 million people have fallen ill. More than 60,000 people have died. Europe accounts for the lion's share of virus fatalities, but America logged another rise in its death toll to bring the total to just over 7,100.

On Saturday, New York State's toll rose to a devastating pace to 3,565 deaths, Governor Andrew Cuomo said, up from 2,935 the previous day, the largest 24-hour jump recorded there.

President Donald Trump's administration on Friday suggested widespread use of simple masks or scarves might help slow the spread — even if the U.S. leader said he himself wouldn't be following the advice.

"It's going to be really a voluntary thing," Mr. Trump said. "You don't have to do it and I'm choosing not to do it, but some people may want to do it and that's okay."

Anthony Fauci, head of infectious diseases at the National Institutes of Health, cited "recent information that the virus can actually be spread even when people just speak as opposed to coughing and sneezing".

Officials in New York, the worst affected part of the U.S., began advising people to wear masks some days ago, and there were signs on the streets that the advice was being heeded.

Hope in Europe

In Europe, Italy and Spain continue to bear the brunt of a pandemic that has kept millions of citizens confined to their homes, closed schools and businesses and overwhelmed healthcare systems. But official figures suggested unprecedented measures to restrict people's movements were working and that the peak may have hit on the continent.

Spain, which is under a near-total lockdown, on Saturday recorded a second successive daily fall in coronavirus-related deaths with 809 fatalities. The total number of deaths in the country now stands at 11,744, second only to Italy. The number of new Spanish cases also slowed at 7,026, taking the total to 1,24,736.

Italy reported late on Friday that the daily rise of officially registered infections dropped to a new low of just 4%, while the number of people who had fully recovered was rising.

In Germany, where the death toll rose again on Saturday, Chancellor Angela Merkel said figures showing the virus's spread was slowing "give us a little bit of hope". "But it is definitely much too early to see a clear trend in that, and it is certainly too early to think in any way about relaxing the strict rules we have given ourselves," she said.

German authorities joined the U.S. and other countries in encouraging citizens to wear self-made masks in public.



Testing children too: Healthcare workers collecting blood samples from a child to detect the SARS-CoV-2 virus, in Antananarivo, Madagascar, on Saturday. *AFP

U.S. to cover treatment of uninsured people

AGENCE FRANCE-PRESSE WASHINGTON

The tens of millions of Americans who lack health insurance will be covered by the government if they fall sick with the COVID-19 illness, the U.S. Health Secretary said on Friday.

Alex Azar told reporters that the CARES act, a coronavirus stimulus package passed by Congress, included \$100 billion for health care providers who "will be forbidden from balance billing the uninsured for the cost of their care."

Instead, hospitals and healthcare professionals will be reimbursed at the rates for Medicare, a state insurance programme for the elderly.

Mr. Azar added that people who have recently lost

their jobs and thus their insurance would be eligible for a special enrollment period under healthcare exchanges created by the Affordable Care Act. President Donald Trump has spent most of his tenure trying to undo the law, also known as Obamacare, and the marketplaces created under it.

The latest official figures showed there were 27.5 million people without health insurance — but the current number is likely far higher after 10 million people filed unemployment claims in the past two weeks.

Public health experts have repeatedly warned that the uninsured may be reluctant to seek treatment, placing themselves at greater risk and fuelling the spread of the disease.

U.K. death toll records daily high of 708

AGENCE FRANCE-PRESSE LONDON

Britain on Saturday reported 708 more deaths from COVID-19 in a new daily high, as the number of confirmed cases rose to nearly 42,000. The Health Ministry said 4,313 people who tested positive for the virus in hospital had died as of 1600 GMT Friday while there were 41,903 confirmed cases as of 0800 GMT Saturday, up 3,735.

The toll has been steadily increasing at more than over 500 deaths a day this week and the country is bracing for an expected peak in the next week to 10 days. Prime Minister Boris Johnson ordered a three-week lockdown on March 23 to try to cut infections.

China pauses in memory of virus victims and 'martyrs'

In Wuhan, sirens sounded as people fall silent in the streets

AGENCE FRANCE-PRESSE WUHAN

China came to a standstill on Saturday to mourn victims and medical workers killed by the coronavirus, as the world's most populous country observed a nation-wide three-minute silence. At 10 a.m. local time, citizens paused, cars, trains and ships sounded their horns, and air-raid sirens rang out in memory of the more than 3,000 lives claimed by the virus in China. In Wuhan — the city where the virus first emerged late last year — sirens and horns sounded as people fell silent in the streets.

Tongji Hospital staff stood outside with heads bowed towards the main building, some in the protective hazmat suits that have become a symbol of the crisis worldwide. "I feel a lot of sorrow about our colleagues and patients who died," Xu, a nurse at Tongji who worked on the frontlines treating COVID-19 patients, said, holding back tears. "I hope they can rest well in heaven."

Workers in protective wear paused silently beside barriers at one residential community — a reminder there are still tight restrictions on everyday life across Wuhan. State media showed Chinese President Xi Jinping and other officials standing outside a Beijing government compound, wearing white flowers. National flags were lowered to half-mast across the country, including in the capital's Tiananmen Square.

Pedestrians in a busy shopping district stopped and kept their heads low in silent tribute, while police stood with their riot shields



In a mood for reflection: People paying tribute to those who died of the COVID-19 disease in Beijing on Saturday. *REUTERS

down and bowed heads. "During this process, a lot of people including the medical workers... have made extraordinary contributions. They are all heroes," said shopper Wang Yongna.

Park-goers paused their activities too, some with hands together in prayer. Trains on Beijing's subway network halted, and passengers stood silently in a mark of respect.

Mourning the 'martyrs'

Officials said the observance was a chance to mourn virus "martyrs" — an honorific title the government bestowed this week on 14 medical workers who died fighting the outbreak.

The martyrs include doctor Li Wenliang, a Wuhan whistleblower reprimanded by authorities for trying to warn others in the early days of the contagion. Mr. Li's death from COVID-19 in February prompted a national outpouring of grief and anger at the government's handling of the crisis. The ruling Communist Party has

sought to direct criticism to local authorities in Wuhan and surrounding Hubei province, who were accused of downplaying the severity of the virus. Despite drastic measures to lock down the province in January, the epidemic spiralled into a global pandemic. Some restrictions in Hubei were eased in recent weeks after the official stated number of new infections dropped to near zero. Saturday's commemoration coincided with the annual Qing Ming holiday — the "tomb sweeping" festival — when Chinese people visit the graves of relatives and leave offerings in remembrance. Some restrictions were tightened again this week to prevent a second wave of infections, with authorities discouraging cemetery visits to mark the festival. Last year, nearly 10 million people visited cemeteries across the three-day holiday, according to state news agency Xinhua.

At Beijing's enormous Babaoshan cemetery, mourners made online reservations to visit graves in a limited number of time slots, with only three relatives allowed per tomb.

Trump fires top intelligence official

Inspector General Atkinson had played a key role in his impeachment

ASSOCIATED PRESS WASHINGTON

U.S. President Donald Trump on Friday abruptly fired the Inspector General of the intelligence community, sidelining an independent watchdog who played a pivotal role in his impeachment. Mr. Trump informed the Senate intelligence committee late on Friday of his decision to fire Michael Atkinson, according to a letter. Mr. Atkinson handled the whistleblower complaint that triggered Mr. Trump's impeachment last year.

Mr. Atkinson's firing, which is part of a shake-up of the intelligence community under Mr. Trump, thrusts the President's impeachment back into the spotlight as his administration deals with the deadly spread of the virus.

'No confidence'

Mr. Trump said in the letter that it is "vital" that he has confidence in the appointees serving as Inspectors General, and "that is no longer the

case with regard to this Inspector General."

Mr. Atkinson was the first to inform Congress about an anonymous whistleblower complaint last year that described Mr. Trump's pressure on Ukraine to investigate Democrat Joe Biden and his son. That complaint prompted a House investigation that ultimately resulted in Mr. Trump's impeachment. In letters to lawmakers in August and September, Mr. Atkinson said he believed the complaint was "urgent" and "credible." But the acting Director of National Intelligence at the time, Joseph Maguire, said he did not believe it met the definition of "urgent," and tried to withhold the complaint from Congress.

The complaint was eventually released after a firestorm, and it revealed that Mr. Trump had asked Ukrainian President Volodymyr Zelenskyy in a July call to investigate Democrats. The House launched an inquiry in September, and three



Michael Atkinson. *AFP

months later voted to impeach Mr. Trump. The Republican-led Senate acquitted Mr. Trump in February.

Mr. Trump said in the letter to the Senate that Mr. Atkinson would be removed from office in 30 days, the required amount of time he must wait after informing Congress. He wrote that he would nominate an individual "who has my full confidence" at a later date.

According to two congressional officials, Mr. Atkinson has been placed on administrative leave, meaning he will not serve out the 30

days. One of the officials said Mr. Atkinson was only informed of his removal on Friday night.

Tom Monheim, a career intelligence professional, will become the acting Inspector General for the intelligence community, according to an intelligence official. Mr. Monheim is currently the general counsel of the National Geospatial-Intelligence Agency.

Larger shake-up

Mr. Atkinson's firing is part of a larger shake-up in the intelligence community. Mr. Maguire, the former acting Director of National Intelligence, was also removed by Mr. Trump and replaced by a Trump loyalist, Richard Grenell.

The intelligence community, which Mr. Trump has always viewed with skepticism, has been in turmoil amid the constant turnover. Mr. Atkinson is at least the seventh intelligence official to be fired, ousted or moved aside since last summer.

Pro-European Keir Starmer elected U.K. Labour leader

He vows to reunite party, end rift between leftists & centrists

AGENCE FRANCE-PRESSE LONDON

Pro-European centrist Keir Starmer was on Saturday unveiled as the new Labour party leader, heralding a shift in Britain's main Opposition party after a crushing election defeat under veteran socialist Jeremy Corbyn and years of ideological infighting.

The 57-year-old former Chief State Prosecutor defeated Corbyn loyalist Rebecca Long-Bailey and backbencher Lisa Nandy in a lengthy campaign sparked by Mr. Corbyn's resignation after December's loss in the polls to Boris Johnson's Conservatives.

Angela Rayner becomes the new party leader, Labour announced on Twitter, after she was forced to cancel a public conference because of the COVID-19 outbreak.

Mr. Starmer, who was Labour's Brexit spokesman,



Keir Starmer. *AFP

called his election "the honour and privilege" of his life and vowed to "engage constructively" with Mr. Johnson's Conservative government.

Constructive work

Mr. Johnson immediately offered his congratulations and the pair spoke, with Mr. Starmer accepting an invita-

tion to a government briefing on COVID-19 next week. "Keir offered to work constructively with the government on the best to respond to the coronavirus outbreak," his spokesman said.

Mr. Starmer himself vowed to reunite Labour, after deep rifts between supporters of socialist Mr. Corbyn's left ideals and centrists, and wrangling over its Brexit strategy.

He immediately addressed the issue of anti-Semitism that Mr. Corbyn was accused of failing to tackle, which tarnished the party's reputation and caused Jewish members to leave in droves.

"Anti-Semitism has been a stain on our party. I have seen the grief that it's brought to so many Jewish communities," Starmer said. "On behalf of the Labour Party, I am sorry."

Biden to begin process of selecting running mate

He has committed to choosing a woman

ASSOCIATED PRESS WASHINGTON

Joe Biden said on Friday that he will announce a committee to oversee his vice-presidential selection process and is already thinking about whom he'd choose to join his Cabinet.

Mr. Biden, who holds a lead in delegates over Sen. Bernie Sanders but has yet to officially clinch the nomination, also said he's spoken to Mr. Sanders to let him know he'd be proceeding with the vetting process. Mr. Biden has previously committed to choosing a woman as his running mate. Mr. Biden's comments came in response to a question during a virtual fundraiser



Joe Biden. *NT

about whether he'd be willing to release his proposed Cabinet at the same time he announces his vice-presidential pick. Mr. Biden didn't answer the question directly but did indicate that there are a number of people who have been helping his campaign with whom he's discussed whether they'd be "willing to come into a government if I get elected."

Kabul gurdwara attack 'mastermind' arrested

Afghan Special Forces detained ISKP chief Mawlawi Aslam Farooqi in a 'complex operation'

VIJAYTA SINGH NEW DELHI

Afghanistan's Special Forces on Saturday arrested Mawlawi Aslam Farooqi, a Pakistani national and the emir (chief) of the Islamic State in Khyber Province (ISKP), the group that claimed the March 25 attack on a gurdwara in Kabul that killed 27 people, including an Indian.

Confirming the arrest, an Afghan official said on Saturday that the ISKP has strong links with "regional intelligence agencies", hinting at a Pakistani hand in the terror group's operation.

Javid Faisal, the spokesperson of the Office of the National Security Council in Afghanistan, said on Twitter, "ISKP leader Abdullah Orakzai, a Pakistani national

known as Aslam Farooqi, was detained in a complex operation by @NDSAAfghanistan special forces. In initial investigations, he has confessed of strong relationship between the Islamic State-Khyber and regional intelligence agencies."

Senior government officials in India maintain that the ISKP is run by Pakistan's Inter-State Intelligence (ISI) and the arrest of Farooqi establishes it.

ISI link

"Farooqi was a small time militant commander who was active in Pakistan's Khyber area. His rise in the ISKP leadership was made possible by the ISI," said an official. Another official said that Farooqi was earlier as-



Mawlawi Aslam Farooqi

sociated with Lashkar-e-Taiba (LET).

The gurdwara attack in Kabul was executed by a 29-year-old man from Kerala's Kasargod — Muhammed Muhsin. He stormed into the

gurdwara along with two others. As reported earlier, there are indications that another Indian — Sajid Kuthirummal, a shopkeeper from Kasargod who was among a group of 21 people who left India in 2016 to join the ISKP — could also have been part of the terror plot.

Muhsin was killed in the encounter and the whereabouts of Sajid are not known yet.

A July 25, 2019 report published by a UN monitoring team said that Farooqi had replaced ISIL-Khorasan leader Mawlawi Zia ul-Haq in April the same year, referring to another acronym of the IS.

"In April, ISIL-K leader Mawlawi Zia ul-Haq, also known as Abu Omar Khorasani, was dismissed and replaced by Mawlawi Aslam Farooqi, who was previously in charge of operations in the Khyber Agency. Ul-Haq's demotion was reportedly due to poor performance in the context of ISIL-K setbacks in Nangarhar in the second half of 2018. The new leadership nomination was made during a visit by an ISIL core delegation, underscoring the direct relationship between the Pashtun fighters led by Farooqi and ul-Haq's group comprising fighters from Central Asian countries.

ELSEWHERE



Morrison seeks action against wet markets

Australian Prime Minister Scott Morrison on Friday urged the World Health Organization and the United Nations to act against China's wet markets, like the one where the deadly coronavirus is thought to have originated, as they pose "great risks" to the health and well-being of the rest of the world. PTI

South Korea to extend social distancing period

South Korea said on Saturday that it will extend its intensive social distancing campaign scheduled to end on Monday by two weeks in a bid to curb the rate of virus infections to around 50 a day. This week, the government has been gauging whether it should extend a 15-day intensive social distancing policy it implemented on March 21. REUTERS

1 killed, 4 injured in Russia gas explosion

One person was killed and four were injured when a gas explosion ripped through a five-storey residential building outside Moscow on Saturday, authorities said. The blast took place in the town of Orekhovo-Zuyevo during stay-at-home orders from authorities trying to slow the spread of the SARS-CoV-2 virus. AFP

2 killed in knife attack in French town

A man armed with a knife attacked people out shopping in the southeastern French town of Romans-sur-Isere on Saturday, killing two and wounding four, the Mayor said. The attacks took place in the morning outside a bakery, and at shops in the town centre, said Mayor Marie-Helene Thoraval, who said the assailant had been arrested. REUTERS



Sunil Paliwal

Kamarajar Port to boost cargo capacity

N. ANAND
CHENNAI

Kamarajar Port Ltd. (KPL), as part of its expansion programme, has taken up several new projects involving an investment of over ₹1,000 crore, to increase its cargo-handling capacity by about 60% over the next two years.

"Currently, we have a capacity to handle 48 million tonnes of cargo per annum through eight berths," said Sunil Paliwal, chairman and MD, KPL.

"We will be expanding our cargo-handling capacity by 12 million tonnes by May 2020 and 18 million tonnes by 2021, respectively. With this, we will be adding three more berths and raising the total capacity to 78 million tonnes per annum," he said.

"All the new berths will handle coal. Coal berth terminal III and IV with 18 million tonnes capacity is reserved for Tangedco," he said.

KPL had spent almost ₹600 crore on building jetties and capital dredging, while Tangedco had spent ₹450 crore for coal berth terminal III and IV, said industry sources.

Sical's iron ore terminal, which has been lying idle for the last few years due to the Madras High Court's ban on handling dusty cargo, is being converted into a coal berth at a cost of ₹220 crore.

Centre tweaks rules to make inactive accounts functional

Aims to ensure cash transfer under COVID-19 relief reaches beneficiaries

MANOJIT SAHA
MUMBAI

The Finance Ministry has tweaked prevention of money laundering (PML) norms with the aim to make all inoperative accounts functional so that cash transfers by the government under the COVID-19 relief package can reach beneficiaries.

In a communique to banks, the Department of Financial Services has conveyed that in respect of the Pradhan Mantri Jan Dhan Yojana accounts, basic savings account and small accounts, those accounts which have become inoperative due to various reasons – including non-completion of know your customer (KYC) re-



The Centre wants to ensure beneficiaries can withdraw cash without further documentation. ■ V.V. KRISHNAN

quirements or update – rules have been amended with an aim "to avoid any difficulty caused to poor people and beneficiaries of PM-GKY [Pradhan Mantri Garib Kalyan Yojana]".

As a part of the PMGKY scheme, the government has decided to transfer ₹500 per month for three months to the poor and vulnerable sections of the society whose livelihood has been impacted

due to the nationwide lockdown. Accounts that may have become dysfunctional due to non-operation in the account for the last two years have also been made functional.

"Please ensure that beneficiaries do not face any difficulty on this ground and are able to withdraw the money transferred to them by the government without any problems or requirement of additional documentation," the communication said.

"Branch officials and business correspondents may be suitably instructed, along with necessary changes in the system (if required) for adherence to these guidelines," it added.

Coal India's dispatches drop, output increases

Inventories rise at mines, power plants

SPECIAL CORRESPONDENT
MUMBAI

India's largest coal producer Coal India Ltd. (CIL) has seen a 10% fall in dispatches in March 2020 due to a sharp fall in demand from the power sector, leading to an increase in inventories both at power plants and coal mines. This comes amid production rising up 6.5% to 84.4 million tonnes (MT). CIL's dispatches declined 10.3% year-on-year (YoY) to 53.5 MT in March 2020 as demand for power plummeted.

Production declines

For FY20, CIL's dispatches dropped 4% YoY to 582 MT, while production declined about 1% YoY to 602 MT.



India's nationwide lockdown came at a time when power demand had largely remained muted and production at Coal India's mines ramped up following a heavy monsoon season.

Hence, inventories at coal mines and power plants have risen, a general trend seen at the onset of summer but now higher than usual.

Refiners to halve crude import

Sliding demand results in a huge increase in inventories

PYUSH PANDEY
MUMBAI

Indian refiners – from Indian Oil Corporation (IOCL) to Hindustan Petroleum Corporation Limited (HPCL) – are looking to cut down their crude oil imports for April by as much as 50%, even as the oil firms have offers to buy crude at \$20 a barrel or even less.

The reason? All their storage capacities are full and refining need not be done at full capacity due to the over-50% fall in petrol and diesel sales and the nil sales of aviation turbine fuel (ATF).

Confirming the development, R. Ramachandran, director-refineries, BPCL, told *The Hindu*, "We are looking at cancelling [or] deferral of April crude oil supplies. Our refineries are now oper-

ating at 80%, which will be reduced further. Hence, we have to cancel, postpone or sell the cargoes."

IOCL has already written to west Asian suppliers citing 'force majeure' clause as its petrol sales have fallen 54% and diesel sales by 63% after the government announced a nationwide lockdown to contain the spread of COVID-19.

IOCL, which owns about a third of India's 5 million barrels per day (bpd) refining capacity, has reduced its refining capacity by a third as demand for petroleum products has declined substantially. The demand for ATF has also come down sharply due to suspension of flights.

HPCL and Mangalore Refineries and Petrochemicals Limited have also reduced

OPEC, Russia delay meeting

Saudi Arabia, Russia spar over plunging price of oil

REUTERS
DUBAI/MOSCOW

OPEC and Russia have postponed a meeting planned for Monday until later next week, OPEC sources said on Saturday, as a row intensified between Moscow and Saudi Arabia over who is to blame for plunging oil prices.

The meeting's delay came despite pressure from U.S. President Donald Trump for the Organization of the Petroleum Exporting Countries and allies, known as OPEC+, to urgently stabilise global oil markets.

Output cut

OPEC+ is working on an unprecedented oil output curb equal to about 10% of world supply, or 10 million



Lossing flow: The postponement comes despite U.S. President Trump appeal to stabilise prices. ■ REUTERS

barrels per day, in what member-states expect to be a global effort that will include the United States.

Oil prices hit an 18-year low on March 30 due to sliding demand caused by government lockdowns to contain the COVID-19 outbreak, and the failure of OPEC and other producers

led by Russia to extend an earlier deal on output curbs that expired on March 31.

Three OPEC sources, who asked not be identified, said the emergency virtual meeting planned for Monday would likely be postponed until April 8 or 9 to allow more time for negotiations.

Consumption, external trade to see impact

Standstill to affect investments: KPMG

SPECIAL CORRESPONDENT
MUMBAI

India's private consumption, investment and external trade, the three major contributors to GDP, will get affected, according to KPMG's report titled "Potential impact of COVID-19 on the Indian economy."

India's real GDP decelerated to its lowest in over six years in third quarter of 2019-2020, and the outbreak of the COVID-19 posed fresh challenges.

Steps taken to contain its spread, such as nationwide restrictions for 21 days and a complete lockdown of States, have brought economic activity to a standstill and could impact both con-

sumption and investment, said the report.

While Indian businesses, barring a few sectors, can possibly insulate themselves from the global supply chain disruption caused by the outbreak due to relatively lower reliance on intermediate imports, their exports to COVID-19 infected nations could take a hit.

In sum, the three major GDP contributors – private consumption, investment and external trade – will get affected. The impact would be even more severe if domestic supply chain disruption caused by the 21-day lockdown was to affect the availability of essential commodities.

Five years after its launch, the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme has almost achieved a total balance of ₹1-lakh crore.

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Key facts:

According to the latest data, the total balance in these basic bank accounts stood at ₹99,752 crore with 35.50 crore beneficiaries.

Public sector banks have the lion's share in total balance at ₹79,177 crore, followed by regional rural banks and private sector banks maintaining ₹17,648 crore and ₹2,926 crore, respectively.

The scheme focusses on rural areas with primacy given to women. Of the 35.50-crore account holders, those from rural and semi-urban regions were 21 crore. Female beneficiaries were 18.88 crore.

Total balance under the scheme, launched on August 15, 2014, grew faster in the last three years, which was boosted by demonetisation in November 2016. It gathered momentum last year and gained rapid pace in the last six months, leading to scepticism on the possible link between elections and spurt in balances.

The average balance in PMJDY accounts has also been going up.

About PMJDY:

The primary aim of this scheme is to provide poor people access to bank accounts.

The scheme covers both urban and rural areas of India.

All bank accounts will be linked to a debit card which would be issued under the Ru-Pay scheme. Rupay is India's own unique domestic card network owned by National Payments Corporation of India and has been created as an alternative to Visa and Mastercard.

Under the first phase of this scheme, every individual who opens a bank account becomes eligible to receive an accident insurance cover of up-to Rs 1 Lakh for his entire family.

Life Insurance coverage is also available under PMJDY. Only one person in the family will be covered and in case of the person having multiple cards/accounts, the benefit will be allowed only under one card e. one person per family will get a single cover of Rs 30,000.

The scheme also provides incentives to business and banking correspondents who serve as link for the last mile between savings account holders and the bank by fixing a minimum monthly remuneration of Rs 5000.

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Coronavirus: TCS uses AI for drug discovery

The researchers have identified 31 candidate molecules to target the main protease which helps the virus replicate

SHUBASHREE DESIKAN

Scientists from TCS Innovation Labs in Hyderabad are harnessing the power of artificial intelligence (AI) to identify new molecules which might have the potential to target specific parts of the novel coronavirus (SARS-CoV-2). Using new methods, they have identified 31 candidate small molecules, which may serve as inhibitors of the chymotrypsin-like protease, one of the key drug targets in the fight against COVID-19.

The results have been posted in a preprint repository *ChemRxiv*. Preprints are yet to be peer-reviewed and published in scientific journals.

Target proteins

The genome of the novel coronavirus codes for several proteins that have crucial roles in entry of the virus into the host cell, its replication, assembly and host-pathogen interactions. Some of these proteins that help the virus perform its functions are common targets for drug developers. Among these

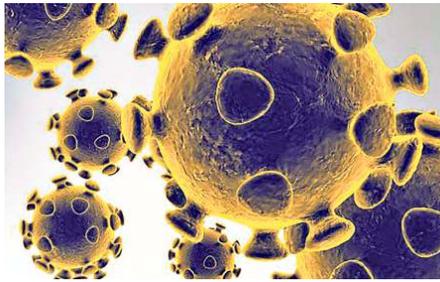
drug targets are the spike protein, which helps the virus attach itself to the host cell and enter it, and viral proteases which help it replicate.

Role of viral protease

"The viral RNA synthesises two long polyproteins when it infects human cells via a human cell surface protein. The role of the protease protein is to cut the polyproteins to individual proteins, so that new viruses can be assembled. This is important for its replication and survival," explains Arijit Roy from the Life Sciences Division of TCS Innovation Labs, Hyderabad, in an email to *The Hindu*.

The chymotrypsin-like protease or the main protease primarily does the function of cleaving the polyprotein into proteins and the papain-like protease also aids in this process. The former was chosen as the drug target by the group for their research.

First, using a database of approximately 1.6 million drug-like small molecules from the ChEMBL database, the researchers trained



Line of attack: Prime drug targets are viral proteases which help the virus replicate and the spike protein. •AFP

the generative deep neural network model. As a second step, the network was re-trained with protease inhibitor molecules. This was done with a view to narrow the focus of the neural network on to a smaller subset of the chemical space. "We trained the system with all available protease inhibitors and asked the pre-trained model to produce more new molecules that

possess the characteristics of protease inhibitors," says Dr. Roy, who is an author of the preprint. "Finally, we checked how well these newly produced molecules can bind to the target protein – chymotrypsin-like protease of the virus."

Starting from a space of nearly 50,000 molecules, the team has made a short list of 31 candidates. Two of the designed molecules had

a high degree of similarity to Auranitamide, a naturally occurring antiviral-compound.

"Our aim was to create new molecules which possess the characteristics of protease inhibitors. We checked, whether these molecules retain all the drug-like properties. We also checked how easily they can be synthesised. All these were part of the AI-based model," says Dr. Roy.

Drug discovery is a complex process, needing several layers of validation before the drug may come in use. In this work, the researchers have brought down the time taken for the initial step of designing suitable candidate molecules for testing from years to just a week, reinforcing the power of AI in handling huge datasets.

Clinical trials

"TCS has signed an MoU for collaboration with CSIR. The clinical trials will take time. The first step is the chemical synthesis and biological testing *in vitro*, followed by pre-clinical testing on laboratory animals," he says.

Update on India's war against COVID-19

This involves detection, protection, prevention, prescription and, not the least, participation



SPEAKING OF SCIENCE

D. BALASUBRAMANIAN

Since early March, our war against COVID-19 has been making steady progress in India. This has involved detection, protection, prevention, prescription and participation. Purposely, private groups, industries, medical fraternity, scientists and technologists have joined hands together with the government in this war, both through financial contributions and participation by involving their R&D expertise. Government agencies such as DST, DBT (and its BIRAC), SERB, CSIR, ICMR, DMR, MHPW, DRDO, and others have announced several grants focusing on specific aspects related to this war, while the Tata Trust, WIPRO, Mahindra, the Wellcome Trust India Alliance and several multinational pharma companies have come forward in this joint effort.

Detection, prevention, protection

The first thing is to detect whether a person has been infected by the virus. Since COVID-19 spreads within the moist part of the inner nose and throat, one measures the temperature of the individual around his nose and face, using a thermo-screening device (as used with arriving passengers in airports, or entering buildings and factories). Better devices of greater speed, detail and accuracy, such as whole-body scanners which depict body temperatures with colour codes on a computer monitor have come about from abroad. The National Disaster Management Authority (NDMA) has been offered 1,000 digital thermometers for screening, and 100 full-body scanners.

Clearly India needs these by the thousands. This need has triggered some computer industry people in India to make such body scanners here at home, a positive step. We hope these can come about at the soonest.

Once an individual is tested positive this way, it needs to be confirmed by doing a biological test to make sure that it is coronavirus infection. Until a month ago, we needed to import kits to do this. Today, more than a dozen Indian companies (most notably by the MyLab-Serum Inst. duo which can make several lakhs of these kits a week) have made them, each certified by the national body. This has rapidly expanded the scale of reliable testing rapidly across the country. Once tested positive, the patient has to be isolated and quarantined in appropriate centres. This has been done with remarkable speed and reliability, as mentioned below.

An important way to protect oneself against the invasion by the virus is to wear a mask. We constantly hear about how these are not available or sold at exorbitant cost. The notion that it is not always necessary is wrong. As the well known infection expert Dr. Jacob John of Vellore clarifies (*The Hindu*, April 2), it is vital that we mask ourselves as we move about in streets, since the virus is also airborne. Towards this, even as many entrepreneurs and firms across India have started making these at affordable costs, social media such as WhatsApp show the typical jagged ways of using a baby diaper (unused), male banian (unused), the pallu of a sari, or dupatta and such. Happily enough, after the government clarifications and advice on this matter, more and more people are now seen to mask themselves. TV channels are also doing a useful service by inviting experts and asking them to offer relevant advice to people who have specific questions and doubts about protection in specific individual instances.

In this connection, a very recent piece of advice on protection has been given to people wearing glasses, (and also to eye doctors whom they consult) by my colleague Dr. Muralidhar Ramappa of the L V Prasad Eye Institute, Hyderabad. He says: (1) If you wear contact lenses, switch to glasses for a while. (2) Wearing glasses may provide a layer of protection. (3) Do not skip your eye exam, but take precautions. (4) Your eye doctor may recommend some more precautions. (5) Stock up your prescribed eye medicines, if you can and (6) avoid rubbing your eyes.

In addition to what the Central and State governments and notable private hospitals (for example, Apollo, Medanta and others) have set up as isolation and quarantine centres, several private agencies have helped set up these in Hyderabad, Bengaluru, Haryana, West Bengal, and helped equip them (for example, Infosys Foundation, Cyient, Skoda, Mercedes Benz, and Mahindra). These are some examples of how governments and private agencies have joined hands – as they say. We are all in this together.

Another exciting advance towards protection (and prevention of spread) has been the large scale production of incubators, ventilators and devices to monitor the individuals who have been placed in such quarantine centres. Mahindra has successfully made ventilators in large scale at affordable prices, and DRDO has come up with a special kind of tape in order to make patient protection gowns for clinicians, nurses and paramedics.

Can India offer drugs?

While the possibility of a preventive vaccine for large scale use in India is at least a year away, we need to turn to molecular and drug-based approaches, in which India has great internal expertise and teams of excellent organic and biological scientists. Rightly, the government and some drug companies have turned to them to locally prepare and use several drugs (favilavir, remdesivir, avigan and such), and also modify them using well-known methods. Indeed, the CSIR has already roped in organic chemists and bioinformatics experts who can predict the 3D structures of proteins, so as to look for potential areas on their surface to which molecules can fit (lock and key approach). I have every hope that with such team efforts, India will come out with 'made in India' drug molecules to overcome this killing virus. Yes, we can.

Despite their full knowledge that millions of people have settled in cities and large towns, as daily wage labourers, far away from their families in villages, State and Central governments did not plan ahead for them, nor did they plan to reimburse their wages during the lockdown which blocked their getting back home. This led to a loss of social distancing and possible community spread. Social distancing is, alas, not in Indian culture, while herd mentality is. This could have been thought of by the social scientist advisors to the governments, and could have been avoided.

(Disclosure: it is important to note that I have chosen to highlight only some examples here. There are several more 'unsung heroes' across the states and the nation. I hope they will not be offended that I have ignored them.)

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Novel coronavirus can be transmitted even before symptoms show up

The existence of presymptomatic or asymptomatic transmission makes contact tracing more challenging

R. PRASAD

A study of seven clusters in Singapore by Vernon J. Lee and others from the Ministry of Health, Singapore, provides some evidence that virus transmission to others (resulting in infection) can happen from one to three days before a person shows symptoms. But the World Health Organization maintains that the risk of getting infected with the novel coronavirus (SARS-CoV-2) from someone with no symptoms at all of COVID-19 is "very low". And it says that it is assessing ongoing research on the period of transmission of the virus.

The transmission one to three days prior to onset of symptoms was seen in four clusters, while in three clusters the precise timing of transmission could not be established as the index case and the contacts lived together. The results were published in the *Morbidity and Mortality Weekly Report*.

Early detection and isolation of patients and contact tracing are important to contain the spread of the virus. However, the existence of presymptomatic or asymptomatic transmission adds a new layer of complexity and challenge in tracing contacts.

The first cases in Singa-

pore was confirmed on January 23, and during the period from January 23 to March 16, 243 cases were reported of which 157 were locally transmitted. Of the 157 cases of local transmission, 10 (6.4%) cases have been during the period before the person who spread the virus to others showed any symptoms and hence were presymptomatic.

Evidence from China

This is not the first case where presymptomatic transmission has been seen.

Looking at the serial intervals (the number of days between symptoms onsets in a primary case and a second

dary case) in China, researchers had in a study suggested that 12.6% of transmission was presymptomatic.

According to *Los Angeles Times*, a choir practice for 150 minutes in Washington on March 10 where 60 people participated left 45 people infected with the virus; two died from COVID-19. The county health officials concluded that the "virus was transmitted through the air from one or more people without symptoms".

Similarly, presymptomatic transmission of the virus has been documented in a nursing facility in Kind County, Washington. The re-

sults were published in the *Morbidity and Mortality Weekly Report*. In this case, a healthcare provider, who showed symptoms since February 26, tested positive on March 1 and seven others, too, tested positive for the virus by March 6. An investigation by the Atlanta-based Centers for Disease Control and Prevention (CDC) found that 23 of the 76 residents tested positive for the virus on March 13. Of the 23, 13 did not have any symptoms on the date of testing. Ten of the 13 asymptomatic residents developed symptoms seven days later and hence were presymptomatic at the time of testing.

Some cases in Singapore and other countries suggest that viral shedding can occur in the absence of symptoms and before symptom onset.

Avoidance of grouping

"These findings suggest that to control the pandemic it might not be enough for only persons with symptoms to limit their contact with others because persons without symptoms might transmit infection. Finally, these findings underscore the importance of physical distancing in the public health response to the COVID-19 pandemic, including the avoidance of congregate settings," the authors write.

'Shutdown alone is not enough to break the chain'

R. PRASAD

In an unprecedented measure, India on March 25 began a country-wide shutdown for 21 days to cut the transmission chain of the novel coronavirus (SARS-CoV-2). Till Wednesday, India had adopted the containment measures of screening, testing, isolating and tracing contacts.

On March 25, The WHO Director-General Tedros Adhanom Ghebreyesus said: "Shutting down population movement is buying time and reducing the pressure on health systems. But on their own, these measures will not extinguish the epidemic. The point of these actions is to enable the more precise and targeted measures that are needed to stop transmission and save lives." Among other measures every country should take, the WHO chief said the production, capacity and availability of testing has to be ramped up, and a system to "find every suspected case at community level" has to be implemented.

Giridhara Babu, Head of the Lifecourse Epidemiology at the Public Health Foundation of India, Bengaluru, in an email to *The Hindu* explains how the shutdown along with testing can help flatten the curve.

Prime Minister Narendra Modi said 21 days of lockdown will help cut the transmission chain. Is that true?

Yes, it is the bare minimum period we require to be sure. Prime Minister Narendra Modi's call for a 21-day nationwide shutdown is an effort to break the chain



Giridhara Babu • SPECIAL ARRANGEMENT

of transmission. India's COVID-19 fight could make or break the global war. The "incubation period" means the time between catching the virus and beginning to have symptoms of the disease. Most estimates of the incubation period for COVID-19 range from 1-14 days.

A lockdown for 21 days would be a great social experiment which allows physical distancing. If followed strictly, it will contribute to delayed peak and to an extent, in flattening of the curve. Lockdowns may have to get extended in the areas with high transmission. It is important to identify such areas.

India has imposed the lockdown much earlier than many countries, including China, which failed to contain the initial spread of the virus. Although it started late, the Wuhan shutdown slowed the dispersal of infection to other cities by an estimated 2.91 days, delaying epidemic growth elsewhere in China. Other cities that

implemented control measures pre-emptively reported 33.3% fewer cases in the first week of their outbreaks compared with cities that started control later.

Epidemiologists say that measures implemented during this time did work. But China's mammoth response had one glaring flaw: it started too late. This delayed the measures to contain it.

In China, implementing the measures three weeks earlier, from the beginning of January, would have cut the number of infections to 5% of the total.

Will complete shutdown for 21 days alone be enough to break the chain? Is it right to say that shutdown only buys time?

It is right to say that shutdown not only buys time but also decreases the overall burden and delays the outbreaks in most places. Stronger containment measures done together with these mitigation measures will ensure flattening of the epidemic.

Mitigation measures or shutdown alone are not enough to break the chain of emerging COVID-19 pandemic. The containment strategies include identifying all cases which are positive and identifying their contacts, too. Once identified, cases will have to be isolated, and contacts will have to be placed under quarantine.

Mitigation is a precursory measure and if containment is also not done, it is not going to help. Both need to go hand-in-hand.

Also, reviewing of States

where any single case is confirmed is need of the hour. Contact tracing of all those people who might have got the infection is highly needed. Only then will India succeed in current strategies to combat COVID-19.

What then should be done after the lockdown?

Aggressive testing alone without mitigation doesn't help in breaking the chain of transmission. Without mitigation, the spread of the infection from one person to another will happen at a faster rate. We may find a certain number of cases doubling every week, also the number of deaths. The lockdown is an opportunity for us to rapidly scale up the capacity to have enough resources to manage, isolate and provide intensive care for those who needed it.

Both measures going hand-in-hand could have a reasonable effect on flattening the epidemic curve.

The revisions in testing strategy involving accredited private laboratories too could not solve the issue since only a particular number of suspected can be tested in a day. With its high population, testing everybody in India is out of the question. Therefore, we need to follow mitigation measures. I recommend the syndromic approach now, wherein we need to manage every case of fever, cough and respiratory distress as COVID-19 unless otherwise proved. Once testing is scaled up, this can get better.

Should India find all suspected cases in the community and test them, as per WHO's

recommendation?

Tracing such contacts, quarantining them and testing such cases are definitely most necessary but not sufficient by themselves. Wherever hot spots are present, stricter enforcement of lockdown, even beyond what is already announced is needed. There should be enforcement of active surveillance in these areas for any flu-like illness, and people should be encouraged to self-report. Other measures such as providing accurate information and building awareness in the hot spots, especially on personal hygiene, hand hygiene and cough etiquettes are necessary.

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Bounty from oil plunge

Why has India reacted to declining global crude prices by raising excise duties?

K. BHARAT KUMAR

The story so far: Till U.S. President Donald Trump's tweet last week, on his conversation with Saudi Arabia's Crown Prince Mohammed bin Salman, Brent crude prices had been declining in an unprecedented manner, touching an 18-year low. Mr. Trump's assurance that the West Asian kingdom and Russia, major oil producers, would soon announce a production cut sent prices up again. Earlier this year, Saudi Arabia and Russia had fallen out on agreements to cut production which would have kept oil prices up.

What has helped oil prices swing wildly both ways?

Brent crude had tanked about 50% over the month of March and was trading in the region of \$26 per barrel till Thursday. Prices jumped, and crude now trading at about \$33 per barrel, after the U.S. President's tweet that a production cut could be 'as high as 15 million barrels' per day. To set that in context, when talks on production fizzled out earlier, Saudi Arabia said it would raise its production from 9.8 million barrels per day (bpd) to 12.3 million bpd.

Why does it matter to the U.S. how much oil its competitors produce?

Profits that companies make in selling oil depend directly on the cost of extraction, which is influenced by factors such as the terrain where the oil field is located. There is still a staggering quantity of oil in the world left to be extracted but the cost of extraction is increasing. For example, fracking, which helps extract oil from rocks, and which is a significant source for U.S. extraction firms, does not come cheap. So, a spike in production by Saudi Arabia and Russia typically drives down oil prices, following the traditional concepts of supply and demand. Beyond a certain point, U.S. producers may not be able to withstand declining oil prices, considering their costs. A January 2020 Haynes and Boone's Oil Patch Bankruptcy Monitor report said that since 2015, when oil prices began to drop save for a few spikes in between, 208 North American producers have filed for bankruptcy involving \$121.7 billion in aggregate debt.

With international oil prices declining, the Central government has used the opportunity to keep end-user fuel prices stable while increasing its own prospects for collection by hiking excise duties

But now, if Saudi Arabia and Russia too are considering a production cut to help bring prices back up again, it is a signal that oil prices have gone too low for even these producers to profit from. Significantly, neither of these oil producers has publicly committed to production cuts.

How has COVID-19 influenced prices?

With the virus which originated from Wuhan in China in late 2019 bringing global economic activity to a near-complete halt, demand for fuel is bound to have dropped significantly. This would have had a dampening effect on oil prices. After all, if you do not move out for work or entertainment but only occasionally for grocery shopping, how much fuel would you burn over the period of the lockdown? Even before the virus-induced lockdown, India's consumption of petrol by volume grew a marginal 2% in February 2020, over April 2019 and diesel consumption fell by 2.2% in the same period.

What is happening to Indian oil prices?

The country's oil bill may have fallen in the recent past and could remain low if Saudi Arabia and Russia do not behave as the U.S. President expects them to, but Indian end-customers may not benefit. Indian prices of petrol and diesel have remained steady.

Between March 2014 and April 2020, the price per barrel of the Indian crude basket fell from \$107 to \$21. The average retail selling price of petrol in Delhi has fallen by ₹1.82 from March 2014, to ₹69.59 per litre in February 2020. Of this amount, the portion that goes to the Centre in the form of duties has more than doubled from ₹10.38 to about ₹23.

In March, the Central government reacted to declining international oil prices by raising excise duties by about Rs. 3 per litre on fuel sold in India, such that the end user saw little or no change in the retail price. This was only the latest in a series of duty increases over the past few years.

Why the excise duty hike?

Even before the virus-induced lockdown paralysed the economy, the government had been battling a fiscal deficit problem. The nearly four-year-old Goods and Services Tax has not immediately yielded robust collections; consumer demand has fallen and there have been calls to put more money in the hands of the consumer, fuelling expectation of a tax cut. The Centre could not afford a blanket cut in income tax rates but it did offer taxpayers the option of moving to a lower tax slab without deductions or rebates.

With international oil prices declining, the government has used the opportunity to keep end-user fuel prices stable while increasing its own prospects for collection. With consumer inflation being largely influenced by poorer supply of specific food items, and not necessarily by rising fuel prices, the government has chosen to keep Indian end-user fuel prices stable with higher taxes to augment its otherwise-emasculated kitty.

Before the COVID-19 lockdown was announced on March 24, there were reports that the most recent duty hike would give the Centre ₹43,000 crore for the fiscal year 2020-21.

How long does SARS-CoV-2 stay potent?

What have scientists observed about the novel coronavirus? Why is it important to clean surfaces?

RAMYA KANNAN & SERENA JOSEPHINE M.

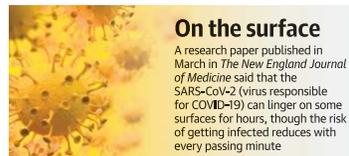
The story so far: With a nascent virus, SARS-CoV-2, causing a global pandemic, the scramble has been, so far, and will be for a time to come, to understand the virus. While it belongs to the coronavirus family – variants of which cause the common cold – scientists and health-care workers are trying to fathom the nature of the virus, its behaviour and patterns, and gain familiarity with the pathogen, hoping that it will give them a better handle on this pandemic. It is known that coronaviruses, which primarily affect the upper respiratory tract in people, are transmitted through respiratory droplets. The simple act of being close to persons who sneeze or cough, even speak loudly (if they are carrying the infection) and the involuntary act of touching surfaces where the viruses have been deposited can infect someone. The period that the virus remains on the surface and remains capable of spreading infection, can be considered the period for which the virus is viable.

What guides our understanding of viability?

The Atlanta-headquartered Centers for Disease Control (CDC) has said that current evidence suggests that SARS-CoV-2 may remain viable for hours to days on surfaces made from a variety of materials. Information listed on the CDC website says: "Cleaning of visibly dirty surfaces followed by disinfection is a best practice measure for prevention of COVID-19 and other viral respiratory illnesses in households and community settings."

One of the studies that guides our understanding of the viability of SARS-CoV-2 was done by the National Institutes of Health, CDC, UCLA and Princeton University scientists who found that SARS-CoV-2 was detectable in aerosols for up to three hours, up to four hours on copper, up to 24 hours on cardboard and the longest – up to two to three days – on plastic and stainless steel. The study was published in *The New England Journal of Medicine* on March 17, 2020 (<https://bit.ly/3dTewEN>), and postulated that the stability of SARS-CoV-2 was similar to that of SARS-CoV-1, but also that the novel coronavirus was more stable.

The researchers wrote: "SARS-CoV-2 remained viable in aerosols throughout the duration of our experiment (3 hours)... Our results indicate that aerosol and fomite (materials capable of transmitting the infection) transmission of SARS-CoV-2 is plausible, since the virus can remain viable and infectious in aerosols for hours and on surfaces up to days."



On the surface

A research paper published in March in *The New England Journal of Medicine* said that the SARS-CoV-2 (virus responsible for COVID-19) can linger on some surfaces for hours, though the risk of getting infected reduces with every passing minute

Surfaces	HOURS TAKEN FOR VIABLE VIRUS TO...	
	... reduce to half of its initial value	... completely disintegrate
Aerosols (such as saliva droplets)	1.09	3
Plastic	6.81	72
Stainless steel	5.63	72
Copper	0.774	4
Cardboard	3.46	24

An analysis by the CDC on the cruise ship Diamond Princess which had 3,700 passengers and which was quarantined after a large number of them developed COVID-19, showed that the SARS-CoV-2 RNA was found on surfaces in the cabins of people who were infected, for up to 17 days after the passengers disembarked, and before disinfection procedures were initiated. However, the analysis mentioned that "data cannot be used to determine whether transmission occurred from contaminated surfaces," meaning the scientists were not the wiser about whether the virus on the surfaces infected people on the ship.

Scientists are trying to estimate the decay rate of the virus on various surfaces to determine how long they will be potent or capable of spreading the infection to others who come into contact with the surfaces. There are, of course, no rules about survival on surfaces, since everything depends intensely on the environment as well.

The good news, scientists say, is that by themselves, viruses are not capable of multiplying; they need a host for that. So disinfecting surfaces and practising hand hygiene will reduce the chance of infection

The World Health Organization (WHO), reacting to a global fear of the infection spreading via newspapers, said: "The likelihood of an infected person contaminating commercial goods is low and the risk of catching the virus that causes COVID-19 from a package that has been moved, and exposed to different conditions and

temperatures is also low." Additionally, the International News Media Association has recorded that there has never been a documented incident whereby the COVID-19 virus has been transmitted from a print newspaper, print magazine, print letter, or print package, citing doctors and scientists.

The good news, scientists say, is that by themselves, viruses are not capable of multiplying; they need a host for that. So disinfecting surfaces, and practising hand hygiene, besides avoiding touching the face, will greatly reduce the chances of people catching infection from surfaces that are not reinfected.

What is the solution?

Disinfection helps in reducing the viral load in the environment, public health experts say. A 1% hypochlorite solution is an effective disinfectant on various surfaces.

Presently, massive disinfection efforts are being carried out in public places as a control measure. This is assuming that people would have spit in the open or sneezed without covering their mouth.

Floors, walls and surfaces frequently touched by hands should be disinfected as per guidelines. This is because handrails of staircases, elevators, door handles, armrests of chairs, table surfaces can be contaminated by droplets.

The CDC has also recorded on its website: It is unknown how long the air inside a room occupied by someone with confirmed COVID-19 remains potentially infectious. Facilities will need to consider factors such as the size of the room and the ventilation system design (including flowrate [air changes per hour] and location of supply and exhaust vents) when deciding how long to close off rooms or areas used by ill persons before beginning disinfection. Taking measures to improve ventilation in an area or room where someone was ill or suspected to be ill with COVID-19 will help shorten the time it takes respiratory droplets to be removed from the air.

Is there something that people can do themselves?

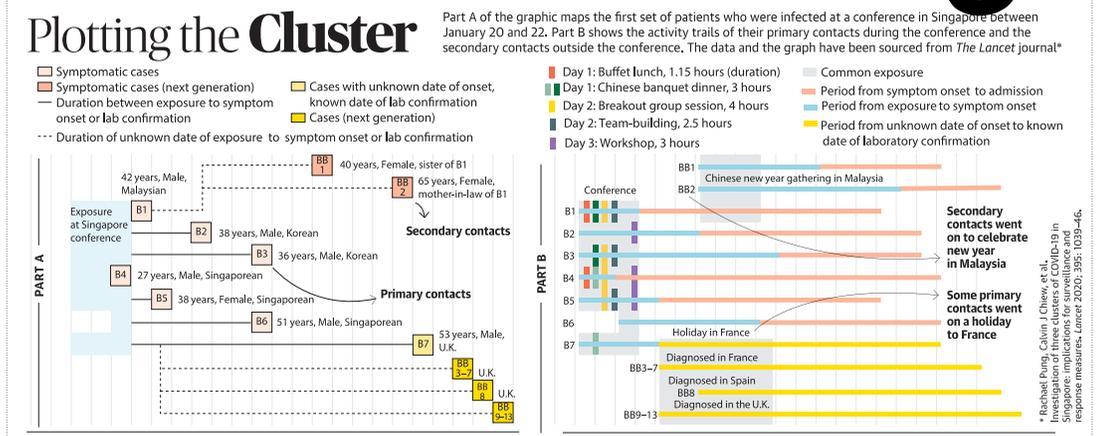
A good part of avoiding COVID-19 infection indeed rests on each and every individual. Following hand hygiene – washing hands frequently with soaps and sanitisers is key. Maintaining physical distance between one another is also very important.

Measures such as a lockdown attempt to do precisely this: restrict the access of people to public spots, thereby making sure that there is no opportunity for gatherings in large numbers.

It is important to respect the rules of the lockdown, those under quarantine must remain indoors, since asymptomatic people making sorties outside the home might spread the infection to others.

Why must COVID-19 clusters be identified?

Can infected individuals be tracked and quarantined quickly with the help of contact tracing?



VIGNESH RADHAKRISHNAN

The story so far: On Monday, the Delhi police cordoned off the area around a masjid located around 100 metres from the Nizamuddin dargah. Around 9,000 people from across the country, Indonesia, Malaysia, Thailand and Saudi Arabia had attended a gathering at the Alami Markaz Banglawali Masjid, the headquarters of the Tablighi Jamaat, in the Nizamuddin area of Delhi in March. Many returned home, and the government was alerted about a disease cluster when cases of COVID-19 surfaced in several States in people who had attended or were linked to the Nizamuddin gathering. Tamil Nadu, for instance, has identified all 1,103 people (from the State) who attended the conference in Delhi, helped by cooperation of the participants themselves. Several State governments have struggled to identify the participants as some of them switched off their phones or have simply gone off the radar.

What is a disease cluster?

A disease cluster is defined as "an aggregation of cases in an identifiable subpopulation." Dr. Daniel Wartenberg, who spent more than a quarter century investigating such clusters in the United States, coined this definition in a research paper he wrote for the *Journal of the Royal Statistical Society*.

The word 'cases' in the definition stands for people with similar symptoms or a medical condition and 'subpopulation' points to those who share or belong to the same space, time, family, workplaces, etc.

Reports show that the novel coronavirus can travel about six feet from a diseased person and cause infection between two and four individuals. Thus, when people congregate in a place – typically for worship/shopping/commute – the chance of a disease spread multiplies, resulting in a cluster of cases. The size of a disease cluster could vary widely from just four cases to as many as 5,000 depending on the place visited by the infected individuals.

All patients who belong to a disease cluster need not have shared space and time. For instance, a person who picks up the infection from a co-passenger during a flight may infect a taxi driver who picks him up from the airport. Such secondary transmissions also belong to the same cluster with the primary source being the passenger. The cluster keeps growing as the driver could infect a family member, the passenger could infect a nurse in a clinic after developing symptoms and so on.

How are clusters identified?

Health workers often stumble upon clusters accidentally. In a paper published in *The Lancet journal* by the Singapore 2019 Novel Coronavirus Outbreak Research Team, the process of discovering clusters is described in detail (see *graphic*).

The *graphic* shows one such cluster of cases which originated in a company conference in Singapore. The conference that happened between January 20 and 22 was attended by 111 participants from 19 countries and at least one of them was from Wuhan, China, the epicentre of the novel coronavirus outbreak. On February 4, Malaysia detected a person who had been to the conference as a COVID-19 case. Singapore authorities were alerted. The health workers contacted the other participants and quarantined them. Then they mapped their secondary and tertiary level of contacts (all those not infected by the primary case) – as shown in Part A of the *graphic*. Then they were tested and isolated if necessary. Once they found a set of cases among those who attended the conference, it was identified as a cluster. In parallel, the activity trails of the primary infected during the conference and also of others outside the conference were pieced together like a puzzle. Those who had come in contact with the infected during such activities, for example the hotel workers, were called in for testing. This is called contact tracing.

Part B of the *graphic* shows detailed activity trails of all the primary, secondary and tertiary contacts. Such mapping also helps in calculating the time taken by each individual to show symptoms, or to be declared as suffering from COVID-19, from the time he or she was infected. This information impacts how future cases are handled.

What are the challenges after identifying a cluster?

Discovering a cluster is akin to a fire alarm going off. Every moment wasted will spread the fire further. The faster the infected individuals are identified and quarantined, the lesser the number of future contacts. But this is easier said than done. As of Saturday at least 1,023 positive cases in 17 States/Union Territories have been linked to the recently discovered Nizamuddin cluster in India. The cluster which was discovered in late March originated in a religious congregation in the Nizamuddin area of New Delhi. As of April 2, 9,000 people linked to the event which happened in mid-March have been traced, according to the Joint Secretary, Health Ministry, Lav Agarwal. Close to 1,300 of them

were foreigners, he said. In such large clusters, identifying the participants will be challenging. Reports from Tamil Nadu show that the attendees came forward in numbers after the State's Chief Minister issued an appeal. On Friday, Maharashtra Health Minister Rajesh Tope said that around 1,400 people from the State, who had attended the Delhi event, had been traced. Mr. Tope said these people are being isolated or quarantined by the district administrations.

Sources said Andhra Pradesh is tracing the digital footprints of those who tested positive for COVID-19. As those who were infected respond differently in each State, a common protocol cannot be followed and this has pushed the States to adopt various uncharted methods making the process challenging.

Why must the activity trail be followed?

A group of attendees took an early morning flight from Delhi on March 24 and landed in Port Blair, Andaman & Nicobar Islands. Another group boarded a train to Erode, Tamil Nadu. One of the attendees, Navi Mumbai's index patient, had visited Noot Masjid in Vashi, Maharashtra. This led to a secondary transmission to six people, including the secretary of the mosque, his friend, son, grandson and maid and another person who was present at the mosque. This shows that the attendees fanned out to various locations after the conference and engaged in a variety of activities. This leads to the possibility of a wide range of secondary and tertiary transmissions across many States in India.

How have clusters functioned in other countries?

Almost all countries have discovered a large cluster and in most of them, the number of COVID-19 cases shot up after identification of the infected and contact tracing began. As of April 4, South Korea has mapped 83% of its cases to some clusters. More than 51% of the country's cases originated from the Shincheonji Church of Jesus. And most of the infections were allegedly brought to the church by a 61-year-old woman who ignored her symptoms and attended the church.

In Austria, the Ischgl Ski Resort is said to have been linked to 600 cases. A funeral in George Town, Albany, U.S. may have resulted in more than 600 infections. The Osaka Live Music Venue in Japan is directly linked to 80 cases. A dinner party in Singapore is linked to 43 cases.

* Read online – bit.ly/EMIRelief. Manojit Saha on COVID-19, fears and repayment: How will the three-month moratorium on EMIs impact customers?

A nation built to withstand a pandemic

Long before COVID-19, social distancing, washing hands and mask-wearing were common in Japan

TOKYO



'Rows of masked commuters line the train compartment, eyes trained on their phones, bodies held slightly away from each other.' In Japan, this kind of a scene was par for the course on the metro long before coronavirus became a standard part of everyone's lexicon. While the rest of the world dabbled in asymmetrical earrings and oversized handbags, in Japan, facemasks were the accoutrements of a la mode for years. In 2017, Japan produced about 5.3 billion face-masks, up from 1.8 billion in 2008, according to Statista, a market and consumer data-providing firm.

What was behind this mask mania in pre-COVID times? The obvious answer is a heightened awareness

and concern among the public for health and hygiene. Those with cold and cough wore them so as not to infect others. Healthy people wore them so as to lessen their chances of being infected by the sick.

Sociologically minded explanations centred on the desire among many Japanese to minimise social interaction. A mask could make the wearer invisible, less likely to be noticed or talked to.

But the history of mask-wearing in Japan is longer and more chequered than these quick explanations, traversing a century worth of past pandemics, natural disasters, air pollution, new kinds of flora, allergies and technology. A massive outbreak of influenza in the early years of the 20th century first kicked off the custom of covering the face with scarves. Then the Great Kanto Earthquake of 1923 triggered a massive fire

that filled the sky of the capital with smoke and ash for weeks. Facemasks became a standard sight on the streets of Tokyo and Yokohama.

In the 1950s, Japan's rapid post-War industrialisation caused rampant air pollution and a concomitant spread of the pollen-rich Japanese cedar tree, which flourished due to rising ambient levels of carbon dioxide. Large parts of the population developed allergic reactions to the pollen emitted by these trees. In 2003, the SARS scare once again caused a spike in mask-wearing, helped by a technological innovation that popularised a new type of non-woven material for masks.

In many ways, Japan is a country built to withstand a pandemic. Other than its extreme hygiene consciousness, one of the greatest social challenges the nation faces is the "problem" of its social recluses. Called *hikikomori*, this cohort of upwards of a million people have chosen to end all social contact, often refusing to leave their homes for years. Long



before the COVID-19 outbreak, social distancing and washing hands were already Japan's super power.

Fast forwarding to the present, thus far Japan does seem to be weathering the coronavirus better than many other nations despite its

proximity to China, early exposure to the virus and population density (the greater Tokyo metropolitan area is home to 38 million people). Speculation about the reasons for the relatively limited number of cases in Japan has included epidemiological and climatic factors. But increasingly, experts and the average person on the street are converging on the country's mask-wearing habit as at least one crucial part of the puzzle.

Misguided advice

Many Western countries, including the U.S., have actively discouraged people from wearing masks, claiming they are of limited efficacy and simultaneously, if contradictorily, asking that available masks be earmarked for medical personnel caring for the sick. But the prevalent expert opinion in East Asian countries like Japan and China is that such advice is misguided. The greatest benefit of masking the masses, they argue, comes not from stopping the mouths of the healthy, but from co-

vering the mouths of people already infected who may be asymptomatic or pre-symptomatic.

That said, masks cannot be the only ingredient in any coronavirus-containment strategy. Japan suddenly began to see a spike in infections towards the end of March, which indicates that the archipelago is not as immune as the data from earlier in the month indicated. Some analysts have suggested that widespread mask-wearing could have engendered a false sense of security among the general population. Large, albeit masked, gatherings took place in Tokyo to view the annual blossoming of cherry trees, for example, despite the government's advice to avoid crowds. Cases began to rise soon after.

Nonetheless, when compared to countries in Europe and the U.S., Japan has, for now, managed to moderate the growth of cases while keeping much of its economy open. And there is a close-to-unanimous belief that the humble mask is to thank.



Pallavi Aiyar is a journalist based in Tokyo

From Cuba with care

Brazil is reintegrating Cuban doctors into its healthcare system as COVID-19 is spreading

SAO PAULO



For more than a year, Yaimé Acuna has been waiting tables at a restaurant in Belo Horizonte, the capital of Minas Gerais State. Before she turned to serving drinks and food to customers, the 30-year-old Cuban worked as a doctor at a healthcare unit in the interior of the Brazilian State, seeing more than 20 patients a day. In November 2018, Ms. Acuna lost her job as a pact between Brazil and Cuba ended abruptly with the election of Jair Bolsonaro as President. Deciding to stay in Brazil to earn a local diploma, she worked as a waitress to survive.

Ms. Acuna is one of 1,800 Cuban doctors who stayed back in Brazil after the programme, which brought

them here was scrapped. Now, as COVID-19 spreads across this country of 210 million people, its healthcare system faces an unprecedented stress and the government is turning to the Cubans for help. "I am very excited to be able to work as a doctor again. The disease is growing here and I want to help," said Ms. Acuna, as she heard about the federal government issuing a notification to "re-integrate the Cuban doctors" in the healthcare system.

The Cubans came to Brazil under a programme called 'Mais Medicos' (More Doctors), launched by then President Dilma Rousseff in 2013 with a plan to appoint doctors in the most remote and vulnerable places. In five years, 8,000 Cuban doctors were appointed in basic health units across 3,000 municipalities. With Mr. Bolsonaro, who constantly attacked the "communist" Cuba for



"selling its doctors" during the 2018 election campaign, becoming President, Havana cancelled its arrangement with Brasilia and most doctors went home. But some, like Ms. Acuna, stayed back, doing odd jobs or studying. With more than 9,200 in-

fections and 365 deaths till now, Brazil is desperate for more helping hands and looking at the Cubans, who are eager to chip in. "The anxiety for working and helping is very high," says Niurka Perez, head of the Association of Cuban Doctors, who stayed on in Brazil. "The country is currently in an emergency but they have not told us when we are going to be called," adds Ms. Perez.

Hiring more professionals

The Ministry of Health announced last week that it would hire 5,811 medical professionals to reinforce the fight against COVID-19, with local doctors getting the first preference. The Cubans are likely to be called for jobs next week or within 15 days. The news has given a ray of hope to people on the margins of Brazilian society who were badly affected when the Cubans left the health units in their communities. "The programme was essential to assist and guarantee healthcare to people who had hitherto been unassisted. With the

abrupt disruption of the plan, several communities, especially the indigenous people, were left without any medical support and the situation continues to be so," says Denise Pimenta, an anthropologist at University of Sao Paulo.

Ms. Pimenta, who works extensively with the marginalised people, says Brazil needed to invite doctors from Cuba, a country of just 11.5 million people, because of the elitist nature of medical studies in the country. As most doctors come from a privileged background, says Ms. Pimenta, the remote areas were left ignored. "Brazil has always had many doctors, being very well-paid compared to the rest of the population, but most of them never wanted to leave the big centres and their facilities to serve in peripheral and precarious regions," says Ms. Pimenta, adding the Cubans went to work in locations that were considered "end of the world" for Brazilian doctors.

Now, as COVID-19 grows exponentially across the country, the private

medical centres have already collapsed and all eyes are now on the hospitals run by the country's Unified Healthcare System (SUS), which has faced massive cuts in resources since the impeachment of Ms. Rousseff in 2016. "It is still the best coordinated healthcare system that exists. The Cuban doctors are completely aligned with the SUS guidelines. If they come back, they can provide quality healthcare in the remote areas and peripheral regions such as slums," says Ms. Pimenta.

As the SUS hospitals get filled with patients, many healthcare workers are in danger as they lack basic protective equipment. Just in Sao Paulo State, close to 600 professionals are suspected of having caught the virus. In the slums, entire communities have turned to making their own masks and hiring private services to survive the outbreak. With the peak of pandemic still weeks away, Brazilians can't wait much longer for the Cubans to come back and support the creaking system.



Shobhan Saxena is a journalist based in São Paulo

Uncertainty during difficult times

Sri Lanka's working people are worried their pay and jobs will be easy targets as the economy is hit

COLOMBO



Sri Lanka has been under curfew for over a fortnight. The near-total lockdown and the over 10,000 violators that police have arrested have ensured that almost everyone stays indoors.

Depending on the cash left in hand or their bank balance – in case of those making card payments – and social networks, some have been managing – either by buying from the trucks sporadically selling essentials in different neighbourhoods, or placing online orders, or tapping friends with curfew passes.

For many of them, especially families with children, older people and pets, the insecurity about diminishing supplies is real. As is their gen-

eral anxiety about a once-distant virus now having become a threat right outside their doorsteps. The risk is here and now.

COVID-19 has hit everyone, but some have been hit more than others. Many of Sri Lanka's working people – while tackling the everyday challenge of sourcing food in these difficult times – appear consumed by a greater fear. Will their jobs wait on the other side of this crisis? What might be the 'normal' they would return to?

Thangavel Malar, 30, has been employed in a garment factory at the Free Trade Zone (FTZ) in Katunayake, some 35 km north of Colombo, for the last five years. "The factory has been closed because of the virus. On March 21, my family somehow managed to return to our hometown with a colleague who was travelling back urgently to attend her

father's funeral," she says from Batticaloa in the Eastern Province, 300 km away.

Ms. Malar hasn't been able to check if her salary for March, of LKR 20,400 (roughly \$8,165) has been credited to her account as her employers had assured. "We can't go out now. We don't know whether they will pay us anything for April, or take us back after this problem ends," says the mother of two. But compared to hundreds of her colleagues stuck in the FTZs in Katunayake, neighbouring Biyagama and Koggala in the southern Galle district, Ms. Malar says she is better off. At least she got back home.

No cash, no food

Some thousand workers are still in their boarding houses near their factories, without cash, food supplies or information on when their employers might arrange transport for them to go to their hometowns, according to Padmini Weerasuriya, director of Women's Centre, an organ-

isation working with FTZ workers. The employers cannot simply "wash their hands off", she says. "Open your eyes and see their plight. After all, these workers will rush back to your factories when you reopen. You cannot abandon them until then, you have a responsibility," she tells the factory owners.

Sri Lanka's first FTZ was set up in the late 1970s, when the economy was opened up. In the following decades, they have expanded to different parts of the country with the aim of increasing employment and boosting exports. According to Sri Lanka's Board of Investment, the apparel sector, crucial to the economy, fetched a revenue of \$5 billion in 2018 while employing 15% of the country's workforce.

As exports plummet during the pandemic, workers are worried about their future. They know that if the factories, when they reopen, decide to cut costs, their salaries and jobs will likely be early targets. At one level, the coronavirus outbreak



has amplified their existing poverty – many are heavily indebted trying to make ends meet – but at another, it has made their jobs and lives even more precarious.

Workers employed in Sri Lanka's tea estates are desperately asking the

companies to give them work for 25 days. Twenty-five days of work and their productivity alone – 18 kg a day – could bring some incentives over their basic wage of LKR 700 (roughly \$275). However, in the current climate of stalled exports – tea fetched \$1.4 billion in 2018 – and an economy reeling in shock, employers are reluctant to engage them for as many days. Their three year-long, consistent demand for a basic wage of LKR 1,000, that President Gotabaya Rajapaksa said would be given from March 1, is now a failed promise.

"There are trucks going around with some supplies, but most estate labourer families don't have cash to buy essentials. Some say give us rice, we can at least make a *kanji* (porridge) and drink it," says Menaha Kandasamy, adviser to the Red Flag plantation union. "Those working in our tea and rubber estates were already so badly exploited. This pandemic is going to be another good excuse for the employers to exploit them even more in future."

Pakistan's fight against coronavirus

Provincial governments have announced curbs, ramped up preparedness to fight the outbreak

LAHORE



Pakistan's first two coronavirus cases were confirmed on February 26. Since then, the number of infections has jumped to 2,714 now, with 40 deaths. Punjab, the largest province, has more than 1,080 cases, while Sindh has reported 830, Khyber Pakhtunkhwa 343 and Balochistan 175. At least 130 people have recovered so far.

Pakistan has been under a partial lockdown for weeks. Schools and educational institutions and malls and other places of big gatherings have been shut across the provinces.

Musarrat Jamshed Cheema, a spokesperson of the Punjab government, told *The Hindu* that more than 17,000 tests had been conducted in

the province. "We test everyone who has a travel history. We have tested all the *zaireen* (Shia pilgrims who went to Iran). We are now testing locally transmitted cases also who have no travel history but have shown symptoms."

Punjab has established a quarantine facility at Expo Centre, Lahore. "Punjab has systematically tried to deal with the pandemic. A Cabinet committee was formed by the Chief Minister that not just had politicians and bureaucrats but also experts, scientists and virologists. We also consulted Chinese experts and authorities from the beginning."

Ms. Cheema says Punjab has the capacity to quarantine 27,000 people at the moment. Capacity to deal with patients is 100,000 in hospitals all over Punjab in the worst-case scenario.

The Sindh government has estab-



lished isolation centres at 12 different hospitals in the province.

"A field hospital has been established at Karachi Expo Centre. Two full-fledged hospitals have been established outside Karachi to serve as isolation centres. We have estab-

lished quarantine centres in different areas of Sindh that can cater to about 6,000 people," Murtaza Wahab, a spokesperson of the provincial government, told *The Hindu*.

The Khyber Pakhtunkhwa (KP) authorities are also beefing up efforts to fight the outbreak. "We took a partial lockdown and social distancing measures even before the Centre decided upon them."

To ensure maximum coordination, we have formed a task force and a technical advisory group that is looking after all the measures being taken in the province," said provincial Health Minister Taimur Khan Jhagra.

Aggressive contact tracing

"On surveillance and tracking, we are forming Rapid Response Team at the local level to deal with suspected cases and isolate/test them as per procedure. We also do aggressive contact tracing in cluster areas after putting them under quarantine. We are also constantly working on in-

creasing our testing capacity to increase surveillance."

Mr. Jhagra said the KP government had established isolation wards in district hospitals with a capacity of almost 2,600 beds. "We have also collaborated with private hospitals to set up isolation wards with a capacity of almost 600 beds," he said. The Balochistan government was the first to impose a health emergency as the province shares a border with Iran, one of the hardest-hit countries that saw over 50,000 infections and about 3,300 deaths.

"When news of coronavirus cases in Iran broke, we took action. We imposed a ban on the border till we made arrangements. We sent tents and N-95 masks to the Taftan border for the pilgrims," Liaquat Shahwani, a spokesperson for the Balochistan government, told *The Hindu*.

"Four to five rooms for isolation were set up at all district headquarters in the province. We have a dedicated 225-bed hospital in Quetta. We have established 18 qua-

rantine centres on the Pak-Afghan and Pak-Iran borders," Mr. Shahwani said, explaining the measures the provincial authorities have taken to meet the emergency situation.

While the federal and provincial governments have taken these measures, the challenge before Prime Minister Imran Khan is to prevent a total collapse of the country's beleaguered economy while containing the deadly virus.

The Prime Minister said on Saturday that his government is walking a tight rope between the lockdown and the economy. "In the subcontinent, with a high rate of poverty, we are faced with the stark choice of having to balance between a lockdown necessary to slow down/prevent the spread of COVID-19 and ensuring people don't die of hunger & our economy doesn't collapse. So we are walking a tightrope," he tweeted.

"[T]o stop the devastation of the lockdown we have kept our agri sector open & now we are opening up our construction sector."



Mehmal Sarfraz is a journalist based in Lahore

Read the numbered articles on COVID AND prepare one consolidated essay on the topic under various heads like current scenario, future challenges, solution, how it has changed global politics etc. In the Sunday magazine too you will find such numbering club everything and prepare a consolidated essay.

IN BRIEF



Neymar donates \$1 million
RIO DE JANEIRO
Paris Saint-Germain forward Neymar has donated \$1 million to help combat the coronavirus outbreak in his native Brazil. The funds have been divided between UNICEF and a charity campaign launched by TV presenter Luciano Huck. Former Barcelona and Spain star Xavi Hernandez and his wife have donated \$1.08 million to the Hospital Clinic in Barcelona. IANS

UEFA lifts TV blackout for England, Scotland

LONDON
UEFA has lifted a ban on the live screening of Premier League games kicking off at 3 p.m. in England and Scotland for the rest of the season. The blackout has long been in place to protect attendance at matches. The move by European football's governing body is seen as a step towards restarting some domestic competitions in Britain behind closed doors in order to complete the season, interrupted by the coronavirus crisis. AFP



Rohit, Warner best T20 openers: Moody

NEW DELHI
Tom Moody on Saturday picked India's Rohit Sharma, in pic, and fellow-Australian David Warner as the best opening batsmen in T20 cricket. In a question-answer session on Twitter, Moody also picked Chennai Super Kings as his favourite IPL team and M.S. Dhoni as favourite captain. Moody said Shubman Gill "stands out" among emerging players. PTI

Serie A says no date set for return to action

MILAN
Serie A bosses said on Friday that doubts remain over when football can return to Italy — all sport in Italy is suspended until at least April 13. A meeting between top-flight Serie A and representatives of the Italian players' union (AIC) took place by video conference to discuss a date for a return to action and potential player salary cuts. No decision was taken on both. AFP

WNBA postpones start of season

NEW YORK
The WNBA season will not start on time next month because of COVID-19, and when it will begin is unclear. WNBA commissioner Cathy Engelbert announced on Friday the league would delay the season for an indefinite period. Training camps were to open on April 26 and the regular season on May 15. AP

SUDOKU

6						7		
7	1		8	2		3		
	2		7			4		
				9	2		7	
			5		8			
9	3	2						
	6			1		3		
	7		8	9		6		1
		8						9

DIFFICULTY RATING: ★★★★★

Solution to yesterday's Sudoku

1	7	8	2	4	3	9	5	6
2	4	3	9	5	6	1	8	7
6	9	5	8	7	1	2	4	3
5	2	7	4	9	8	6	3	1
3	6	4	7	1	2	8	9	5
8	1	9	3	6	5	7	2	4
9	3	1	6	8	4	5	7	2
7	5	2	1	3	9	4	6	8
4	8	6	5	2	7	3	1	9

INDIA HAS TO WAIT TO HOST THE SHOWPIECE EVENT UNTIL NEW DATES ARE DECIDED

India has to wait to host the showpiece event until new dates are decided

PRESS TRUST OF INDIA
NEW DELHI

The FIFA Under-17 Women's World Cup to be held in India in November was on Saturday postponed by football's governing body due to the worsening COVID-19 pandemic.

The women's age-group showpiece was to be held at five venues in the country — Kolkata, Guwahati, Bhubaneswar, Ahmedabad and Navimumbai — from November 2-21. It was to be India's maiden appearance in the U-17 World Cup.

U-20 WC postponed
The decision was taken by the FIFA-Confederations working group which was recently established by the Bureau of the FIFA Council to address the consequences of the pandemic.

The working group also recommended postponement of the FIFA Under-20 Women's World Cup Panama/Costa Rica 2020 — originally scheduled for August/September 2020.

Meanwhile, the All India



Welcome deferred: India had been looking forward to playing the perfect host to the Under-17 Women's World Cup. *FILE PHOTO: PTI

Football Federation (AIFF) said the postponement was on expected lines.

"Just like other sports events which were postponed due to this dreaded disease, it (postponement of U-17 World Cup) was to happen," said AIFF general se-

cretary Kushal Das.

"The qualifying events in Europe and Africa and other confederations are yet to be held and so the decision was on expected lines."

He said the tournament would most likely be held next year.

- The event was to be held at Kolkata, Guwahati, Bhubaneswar, Ahmedabad and Navimumbai
- Qualifying events in Europe, Africa yet to be conducted

LTA pledges support to revive the sport

TENNIS

KAMESH SRINIVASAN
NEW DELHI

The cancellation of Wimbledon this year due to the coronavirus pandemic has dealt a serious blow to the tennis fraternity.

The Lawn Tennis Association (LTA), which governs the game in Britain, however, has swung into action and pledged around £20 million to tennis venues, coaches, officials and players in order to ensure a healthy revival of the sport in England, Scotland and Wales.

The measure is aimed at protecting the grassroots of the sport even as it aspires to support the professional players and coaches, including providing financial grants to the lower-ranked players.

To ensure viability
"Our primary objective in announcing these unprecedented measures is to ensure clubs and venues remain viable, and coaches and officials are not lost," said LTA chief executive Scott Lloyd in a statement.

Most significantly, ATP/WTA ranked players in the 101-750 bracket in singles and 101-250 in doubles will get appropriate grants. There will also be increased prize money and tournament bonuses when the events are revived.

The financial commitment includes repayment holiday of up to six months for all existing LTA facility



Scott Lloyd. *SPECIAL ARRANGEMENT

loans to the tune of £1 million in all. An equal amount will reach the tennis fraternity through the refund of registration fee for venues for 2019-20.

Hardship fund

A hardship fund of about £13.5 million has been kept to provide interest-free loans of up to £5,000 for those in need. Around £4 million would be provided as financial grant for the LTA-credited coaches and tutors, apart from a separate fund of around £1 million for interest-free loans for coaches up to £5,000.

There will also be support for tournaments cancelled where the players' entry fee may have been reimbursed.

In return for the support, the LTA would ask the players and coaches concerned to commit their time to help open up tennis to more people in their area when play resumes.

The Indian Tennis Association and sports administrators should start looking at ways to do their bit, taking inspiration from LTA.

Training Dutee a new challenge now, says coach Ramesh

'Plan is to make her compete in both 200m and 100m'

V.V. SUBRAMANYAM
HYDERABAD

For N. Ramesh, the SAI athletics coach who gave a new direction to sprinter Dutee Chand's career by supporting her when she was facing the IAAF ban on grounds of hyperandrogenism a few years ago, it is a new challenge to train her for the postponed Tokyo Olympic Games.

"In a way, the rescheduling of the Games is a blessing in disguise for most of the contenders, except, maybe, for those who are ageing."

"In Dutee's case, we are already into the preparatory mode," the 55-year-old Ramesh told *The Hindu*. "The plan is to make Dutee compete in both 200m and 100m events in the run-up to the Games, but the focus will be on 100m as research, and her own inclination, suggests the shorter sprint is more suited to her," he said.

Early start

"It is not just Dutee alone, who is being trained via mobile app."

"The day starts at 4.30 a.m. for all the athletes scattered across Telangana and Andhra Pradesh," he said.

"I first suggest to them to do some visualisation on the day's training session before the start, for this has been proven scientifically to have



Silver lining: Ramesh feels the Tokyo Games postponement is a blessing in disguise for many, including Dutee.

The focus will be on 100m as research, and her own inclination, suggest the shorter sprint is more suited to her

I tell these athletes to stay clear of any infection, improve their immunity by taking lemon, guava and also a little bit of haldi with milk

How is the review done? "For example, Dutee will give me the video feedback of her set of 30m sprints with timings and, based on that, corrective measures will be suggested. Similarly, all the athletes have their own specific training modules.

"I also tell these athletes to stay clear of any infection, improve their immunity by taking lemon, guava and also a little bit of haldi with milk," he said. "When everyone's afraid of the coronavirus threat, 'go one step ahead with care and dare' is my message to the athletes," he said.

reassess preparations

GENERAL

SPECIAL CORRESPONDENT
NEW DELHI

The postponement of the Tokyo Olympics has forced the Sports Authority of India (SAI) to re-evaluate preparations for the same.

On Saturday, it began the process, with SAI DG Sandip Pradhan holding a video conference with Hockey India officials, including CEO Elena Norman and High Performance Director David John. The men's and women's chief coaches were also present.

Various modalities including teams' training and domestic and foreign competitions were discussed with the coaches expressing satisfaction at the measures currently in place at the SAI Centre in Bengaluru.

"We had a positive discussion about the state of affairs and indicated our preferences once the situation improves and as soon as more is known about the possibilities in the future," women's chief coach Sjoerd Marijne said.



Sandip Pradhan. *FILE PHOTO

"We had a very productive meeting, discussed the planning process for the next 16 months and await decisions as to when we can re-start full training," men's coach Graham Reid added.

HI gives ₹75 lakh more

Hockey India, meanwhile, added another ₹75 lakh to take its contribution to the PM-CARES fund to ₹1 crore to counter the spread of COVID-19.

The federation had earlier committed ₹25 lakh before its Executive Board decided to up the amount on Saturday.

England cricketers' noble gesture

PRESS TRUST OF INDIA
LONDON

England cricketers, both men and women, have volunteered pay-cuts and donated £500,000 as contribution towards the fight against COVID-19.

The gesture comes after the England and Wales Cricket Board (ECB) had proposed a 20% cut in players' salaries. The donation of £500,000 is equivalent to a 20% reduction in the men's salaries while the women volunteered for a cut in April, May, June salaries.

"Following a meeting of all of the England men's centrally contracted cricketers, the players have agreed to make an initial donation of 0.5m to the ECB and to selected good causes," read a statement from the players. "This contribution is the equivalent of all of England's centrally contracted players taking a 20% reduction in their monthly retainers for the next three months," the statement said.

These are not normal times, says Narain

'This is the first time in 27 years I am spending more time with family'

RAYAN ROZARIO
COIMBATORE

For Narain Karthikeyan, the "fastest Indian in the world", life has come to a screeching halt due to COVID-19. The former F1 driver agrees that he has lived his life in the fast lane all these years and a sudden stop like this is a bit unusual.

"This is the first time in the last 27 years that I am spending more time with my family. I do not know whether it is a nice thing to happen when the world is struggling because of the virus," Narain told *The Hindu* here on Saturday.

"These are not normal times... in fact, they are the most difficult and make you realise that the world can change overnight — from a bright scenario to a bleak one."

He revealed that things were moving at snail's pace for him. "I need to get the day going, and plan it accordingly."

Hard at work

The 43-year-old racer, whom young drivers look up to for inspiration, is working hard to keep himself fit for future events.

After spending some time in Japan, where he drove in the SuperGT series for Nakajima Racing and finished with a win under testing conditions in the final race of the season, Narain has set



Narain Karthikeyan. *FILE PHOTO

his sights on the European LeMans racing endurance series. "I doubt if anything will happen this year because the situation is so bad," he said.

Will it be difficult for drivers to come back with a bang after a break like this? "It will be slightly difficult but you will have to go with the flow," said Narain.

Battle-ready

"I compete with world-class drivers half my age and I feel I have enough speed in me to beat them on a regular basis. I also keep myself fit all the time," added Narain who, along with the other drivers in the Race Legends group, has planned to chip in for those affected by the pandemic.

Narain said he has never seen anything like this in his life.

"I wish and pray this never happens again."

IPL should happen, says Pietersen

PRESS TRUST OF INDIA
NEW DELHI

The COVID-19 pandemic may have indefinitely stalled all sporting activity, but former England captain Kevin Pietersen "truly believes" that the 13th edition of the IPL should happen the moment there is a window of opportunity.

He proposed a "condensed" league behind closed doors, adding the fans shouldn't be risked.

"Let's say July/August at the earliest... I do truly believe the IPL should happen. I do believe it is the kick-start to the cricket season. I think every single player around the world is desperate to play in the IPL," Pietersen said.

The former star batsman expressed his thoughts on Star Sports' show *Cricket Connected*.

"There could be a way in which to get some money into the franchises, into the economy by having a



Batting for it: Pietersen believes every player around the world is desperate to play in the IPL. *GETTY IMAGES

situation where you use maybe three venues which are completely closed to fans and the players can still go out and play the tournament in three or four weeks.

Condensed version

"So, it's a more condensed tournament in three venues which we know are safe, which we know are secure," he said.

Agreeing with Pietersen,

former India batsman Sanjay Manjrekar spoke on the importance of organising the IPL. "When you talk about the IPL, it's not just about the Mumbai Indians, or a Dhoni or a Virat Kohli, there are a lot of people who are making their livelihood through the IPL," he said.

The IPL was slated to begin on March 29, but has been deferred until April 15.

Langer backs cricket behind closed doors

AGENCE FRANCE-PRESSE
LONDON

Australia coach Justin Langer believes resuming cricket behind closed doors when it is safe to do so will have "great value" for the public, deprived of action by the COVID-19 shutdown.

Like almost the entire sporting schedule around the world, cricket has been halted by the pandemic, with no return date set in stone.

One of the options being mooted is to have the sport resume after restrictions have been lifted, but in empty stadiums.

"When you started off playing cricket, when you were under age, there's no crowds there," he told *BBC Radio*.

"You played it because you loved playing the game, you loved playing with your mates and you loved playing the game."

"For the love of the game, and for still being able to entertain people through TV sets or radio, then there's value in (playing behind closed doors)."

"Yes it's different, but we'll never, ever, ever take for granted how lucky we are ever again."



Entertainment value: Justin Langer wants officials to spare a thought for fans deprived of action.

Bryant heads 2020 Hall of Fame list

AGENCE FRANCE-PRESSE
LOS ANGELES

Five-time NBA champion Kobe Bryant, who died in a helicopter crash in January, headed a star-studded list of players named in basketball's 2020 Hall of Fame on Saturday.

He was among the nine who will be enshrined at the Naismith Memorial Basketball Hall of Fame on August 29.

The others are three-time NBA Finals MVP Tim Duncan, 15-time NBA All-Star Kevin Garnett, two-time NBA champion coach Rudy Tomjanovich and four-time Olympic medalist Tamika Catchings.

The other inductees include three-time NCAA National Championship coach Kim Mulkey, college basketball coach Barbara Stevens and longtime FIBA executive Patrick Baumann, who died of a heart attack in 2018 at the age of 41.



**SWITCH ON
HOPE
SWITCH OFF
FEAR**



9 pm. 9 mins. Tonight.

Magazine



WIDE ANGLE

The elderly and people with mental health conditions are extra vulnerable during this lockdown **p6**



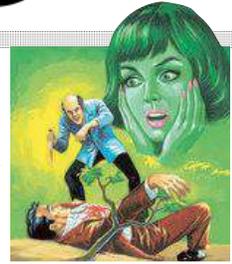
BOOKEND

Locked in and watching the birds on the branches of a peepal tree is a great way to get some life lessons **p7**



60 MINUTES

Even while writing, I try to be as honest as I can, which is also something an actress does, says Madhur Jaffrey **p8**



LITERARY REVIEW

Abir Mukherjee shows his mastery of the retro thriller genre with his latest book in the Sam Wyndham series **p4**

COVER

Shadowed by stigma

Pathogens don't distinguish victims by race, class or other identities, yet a pandemic always brings out people's worst social prejudices **p3**

Hidden bias A young woman in Guwahati. In an absurd fallout of COVID-19, people from the Northeast have become targets of ire in India.

• RITU RAJ KONWAR

last week

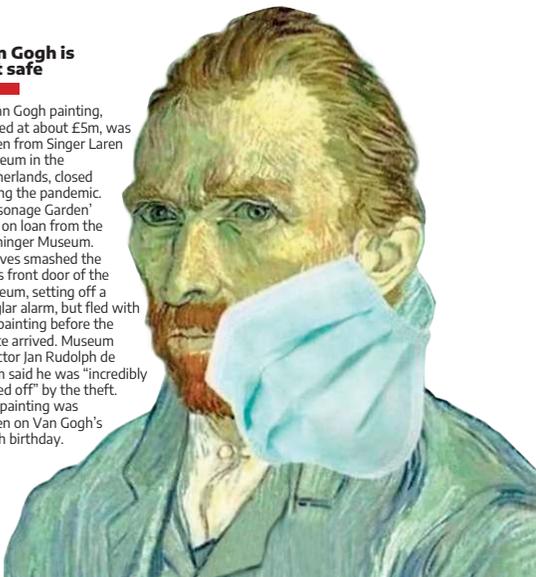


Put to grass

For the first time since WWII, Wimbledon has been cancelled. The tournament, scheduled for June 29 to July 12, is the latest major sporting event to be cancelled or postponed this year. Earlier, the French Open was pushed from May 24 to September 20. As you can play on grass only in summer, postponement was not an option for Wimbledon.

Van Gogh is not safe

A Van Gogh painting, valued at about £5m, was stolen from Singer Laren Museum in the Netherlands, closed during the pandemic. 'Parsonage Garden' was on loan from the Groninger Museum. Thieves smashed the glass front door of the museum, setting off a burglar alarm, but fled with the painting before the police arrived. Museum director Jan Rudolph de Lorm said he was "incredibly pissed off" by the theft. The painting was stolen on Van Gogh's 167th birthday.



Clean break

With tourist cancellations in Egypt reaching 80%, the government, having closed heritage spots, launched a disinfection drive. Ticket offices, visitor centres and walkways around the pyramids of Giza were sprayed. The pyramids themselves were not touched, as they need expert manpower and material, but were lit up in red in a message of solidarity for health workers.



Careful comeback

Wuhan in China, where it all began, gradually came to life as curbs were eased and no cases were reported for more than a week. But doubts remained about asymptomatic carriers, whose numbers China has not reported since mid-February. Meanwhile, the World Bank warned that growth in the East Asia and Pacific region could be as low as -0.5% this year.



Virus load

India saw a spike in COVID-19 cases, with over 1,900 cases and 66 deaths reported when this went to print. Many were traced to a mid-March meeting of missionary group Tablighi Jamaat in Nizamuddin, Delhi. Hundreds of attendees who returned to their States tested positive. The Home Ministry blacklisted 800 Indonesian preachers, while police booked leader Maulana Saad Kandhalvi.



Sanity misplaced

A group of migrant workers who came home to Bareilly, U.P., were sprayed with a chemical solution. Municipal and fire brigade officials had been told to sanitise buses, but they also doused the people, including children, in a spurt of misplaced enthusiasm. A video online highlighted the incident, resulting in widespread anger and an official investigation.



Sayonara Tokyo

The International Olympic Committee pushed the Tokyo Olympics back by a year, rescheduling it from July 23 this year to August 8, 2021. However, the Games will still be referred to as 'Tokyo 2020' and existing tickets will be valid, although full refunds will also be available to those unable to attend. The Paralympics are to be held from August 24 to September 5, 2021.



Refugee corner

Former Indian football captain Bhaichung Bhutia offered an unfinished apartment block he owns in Gangtok as a temporary shelter for migrant workers stranded in Sikkim during the lockdown. Adding that the building could accommodate about 100 people, Bhutia — who is stuck in Siliguri, away from his family in Kolkata — said in a video that 10 people were already staying there and were being provided food.



Tiger on the table

WhatsApp and social media exploded with a flood of pictures of kids riding tigers and stroking great white sharks in their living room, thanks to Google's new 'live 3D' feature that lets you virtually plant a wild animal in your home. At the time of lockdown, with kids on an interminable summer break, and parents scrambling for ways to keep them entertained, families briefly had a 'zoo at home'.



Free press

The Centre approached the Supreme Court to get an order blocking media from publishing or broadcasting anything relating to COVID-19 "without first ascertaining the true factual position" from the government. The Court, however, said it would not interfere with any "free discussion about the pandemic". Instead, it directed media outlets to refer to and publish the official version as well. It also asked the Centre to issue daily bulletins.

Luminous ether

Back then, radio sets were a status symbol, owned only by the privileged

Madan Mohan Mathur

It was September 1939, and the British government had officially declared war against Nazi Germany. I was eight and my father the Resident Magistrate of Batala in Gurdaspur district of Punjab. As a Provincial Civil Service officer, he was expected to keep abreast of the day-to-day developments in the war. Hence he was keen on listening to news broadcasts by All India Radio and BBC London and other foreign stations.

In those days, radio sets were a status symbol, owned only by officials or privileged citizens after obtaining a licence from the government. So after careful evaluation of available brands and discussions with his colleagues, my father ordered the latest model of an HMV (His Master's Voice) radio set imported from Holland.

Aerial display

We were all excited on the day the radio was delivered at our bungalow. It looked like a large wooden box with a big rectangular screen and several knobs. As I watched the elaborate process of setting up the radio, I was fascinated by the installation of the aerial on the rooftop. A bamboo pole was fixed at either end of the roof and a long wire was tied between them, with round crystals on each side. Then a lead wire was drawn from one end of the wire and the other end was taken down through the ventilator into father's bedroom, where it was connected at the back of the radio set.

After father returned home in the evening, everybody gathered around the radio with bated breath for listening to the inaugural broadcast. As father switched the set on, the rectangular dial lit up, showing four wave bands to be selected by moving an arrow shaped needle up and down. But the most attractive and intriguing feature of the dial was a circular magic eye at the centre



ILLUSTRATION: J.A. PREMKUMAR

with a green light which flickered around as the tuning needle slowly moved over the marked metre band, making queer noises. And as soon as any station got tuned in, the magic eye suddenly turned green, and we could hear clear sound from the speaker on the left side of the radio set.

While the main broadcasting station of All India Radio was in New Delhi, the most popular station covering North India was in Lahore. It's Urdu and Punjabi programmes were a hit. But for father, the main focus was news. After dinner every night, he would first listen to the AIR English news bulletin at 9 p.m. Even today, I can hear the deep resonant voice which we all heard with rapt attention: "This is All India Radio. Here is the news read by Melville de Mello." This was followed by the BBC news bulletin at 9.30 p.m. which required careful tuning into the short

wave. The broadcast began with a time signal of three beeps, followed by the sound of the Big Ben striking five in the evening in London.

During summer, when we slept out in the open backyard of the bungalow, the radio was brought out and connected by a long wire to a plug point in the veranda. Father had got a table of the exact size made for the radio. Sometimes, under the starry night, we would all listen in rapt attention to some radio plays by eminent writers like Imitiaz Ali Taj and Rajendra Singh Bedi broadcast from Lahore.

Sunday specials

On Sunday mornings, I eagerly looked forward to listening to the children's programme from AIR, Delhi. I vividly remember the day when, during one of our occasional visits to Delhi, father took me to the AIR studios on Parliament Street to

attend the live broadcast of the programme.

Right from that age, I was fascinated by the magic world of radio broadcasts, which in many ways influenced me later in my forays into creative writing.

The grand old HMV radio set remained an inseparable member of our household and shared our travels even during Partition. When father was confined to bed after a stroke, he continued listening to the news till he passed away in 1967. By that time, the radio had become irreparable and had to be given away for nothing.

Now as I grow old, trying to adjust to the high-tech life of instant connectivity, I am often reminded of those days when we waited for the magic eye to get connected to the world beyond time and space.

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The broadcast began with three beeps, followed by the sound of the Big Ben striking five in the evening in London

The dulled click-clack

Subramanian Nagarajan

Recently, I visited a typewriting institute that still exists on the main road of busy Pondy Bazaar at T. Nagar in Chennai. It's the same place where I did my course and passed the lower grade examination in English and Tamil in April 1963. The institute established in 1951 is being run by its founder's heirs. The present owner felt immensely happy to find an old student remembering it after 57 years.

I well remember the day of examination held in the nearby Ramakrishna Mission High School (Main) near Panagal Park on a heavy rainy day. My seat was near a window, and my fingers were shivering in the cold. Anyway, god was by my side, and I was called for the mechanism test. During this technical interview, when the examiner asked me the name of a particular part of the machine, I honestly told him that I knew the name but forgot then. The examiner repeatedly asked me whether I knew the name or not, but my answer was firm. He could not control his laughter and patted me for my innocent reply.

Later, when I got selected as an office clerk in Southern Railway that year, the dealing clerk advised me to develop my typing skills to help my career. This helped me a lot in my official life for nearly four decades.

By god's grace, at this age of 75, my fingers are strong enough to use both computer and typewriter. Much before the advent of computers, typewriting machines ruled for decades. It was a symbol of professional and technical proficiency of an educated person. "Shorthand" was an additional qualification to get elevated as stenographer or personal secretary. Popularly known as "High Court typists", many professional experts had extraordinary typing speed, using just a finger or two. At times, this boon became a bane, for the boss would know whether the typist is on the job or not, by the machine's sound or silence.

It was not uncommon in those days of typists rising to high positions by their hard work and commitment. Days have changed with the advent of computers that edit, modify, check spellings and give alternatives to what we want to write.

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For the love of nature

How a lover of forests and wildlife instilled the passion in his children

Vijaya Bharat

Anna, as we used to call our father, was a six footer and loved nature. He chased his dream of studying botany and zoology and secured admission in the prestigious Forest Research Institute, Dehradun. In the 1940s, it was a bold decision for the young man from a traditional family in Kerala to go that far.

A.S. Monie, as his name was, joined the Kerala Forest Department, worked in various places in the State, and became the Chief Conservator of Forests, Kerala. We children stayed with our mother, grandparents, uncles and aunts in Trivandrum, now Thiruvananthapuram. Our grandparents were Appa and Ammai for us — only that my youngest brother wanted to know why his Appa had white hair but those of his friends had it black.

We used to look forward eagerly to our father's wee-



ILLUSTRATION: SREEJITH R. KUMAR

kend visits, finishing all home work and getting ready for "nature bonding". Anna would take us to the zoo and make us pet tiger cubs in the nursery and to the aquarium to marvel at fish and corals. We would come home with black mollies, red swordtail and guppies. Visits to the beaches of Shangumthom and Kovalam used to be refreshing and educative as we would see Portuguese man o' war and jelly

fish floating by. He would tell us about the puffer fish lying on their backs and crabs scrambling on the sands.

Ghat drive

Weekend drives through the Western Ghats got etched in our minds with his narratives of the tall Arjun trees, tree ferns, butterflies and the gurgling streams. He would sometimes surprise us by bringing home abandoned baby animals that had to be

nurtured. The animals that we looked after ranged from a baby elephant and a bear cub to a giant squirrel and a mouse deer.

Apart from giving lessons in wildlife and forests, Anna used to show films in schools, conduct expeditions and display forest produce in exhibitions. The Wildlife Week in the first week of October used to be fully packed with activities for my father, with full family involvement. When our neighbours chided him for coming home only on the weekends, he would say, "Forest is calling me and house is asking me to go away."

Father got transferred to Trivandrum when we joined college. His long walks and varied interests helped him live up to 83. In the last two years, his brain used to falter and he seemed to remember the scientific names of trees better than those of his children.

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The memories we leave behind

Be the beloved for those around us, be the light of someone's life

Usha Jesudasan

Most people don't know that one of the fiercest battles during the Second World War was fought in Kohima. The invading Japanese Army was forced to retreat by British and Allied troops in Kohima and Imphal.

Today, on the ridge where the brutal fighting took place is a beautifully maintained war cemetery. There are some 1,420 graves of British and Allied troops and 900 of Indian soldiers. Though many Nagas also fought to save their land, sadly, there is only one Naga grave — of a 21-year-old man.

Each grave, though just a slab of grey stone, tells the story of a young man far from home and the memories he left behind for those who grieved for him. The

words used on these graves — beloved, cherished, selfless, pride, joy, adored, the light of our lives, irreplaceable — tells the story of each man buried there.

I could not but help think of the memories each one had left behind in those words. I remembered my two music teachers, Misses Wroughton, during my childhood in the U.K. who had large pictures of handsome young men on top of the piano — brothers, lovers, fathers and uncles who did not come back from the war.

Though it was 20 years later, they still spoke of them with shaking voices, eyes brimming. Now standing by these graves, I remembered some of the words they used, the words inscribed on so many of these graves.

Priest and writer Henri



Nouwen in his book *Bread for the Journey* often emphasises the need to deliberately make good memories for our friends and family. Take the time, he says, give surprises, create time for togetherness, rejoice in everything, knowing that our loving actions are the memories our loved ones will have of us one day.

Be the beloved for those around us. Be the cherished friend. Be the light of someone's life.

How does one do this in

our busy time-bound lives? I took a day off from my tightly packed schedule and invited my daughter for a day at the beach. She was alarmed initially, then happily joined me. We sat on the warm sand and played our favourite songs. Then we read poems to each other, and finally sat holding each other's hands watching the waves crashing into the sand. We saw the first stars come out and much later a beautiful crescent moon.

"I'll never forget today," she said. "Good. Maybe 20 years from now, you will remember a day when you sat with your mother on the beach and did nothing but listen to music, read poetry and saw the stars."

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FEEDBACK

Letters to the Magazine can be e-mailed separately to mag.letters@thehindu.co.in

Cover story

The parallels between the plague of 1348 and the coronavirus pandemic ('The Decameron and the Corona', Mar. 29) provided great insights into these two cataclysmic events separated by about 700 years. The stark difference in communication facilities



in the 14th century and now has made a huge difference to the number of deaths. But these advances can only do so much without a real cure. Interestingly, even the great leaps made in medicine in the last century have not changed the way the coronavirus has to be fought: by adopting "social distancing" and "lockdown", the same way the bubonic plague was fought seven centuries ago. And it may not change in future either, because medicine can never be ready for a new virus. However, basic human emotions and follies, the callousness of the rich, the suffering of the poor, and the human drama during such events remain the same down the ages, irrespective of material progress.

T.N. VENUGOPALAN

■ The cover story was a wonderful chronicle. Even though *Yersinia pestis*, the deadly bacterium that causes the plague, has surfaced many times through history, COVID-19 is not in the same league. No doubt COVID-19 has vitiated the entire world and dented the global economy severely, but the damage it creates is unlikely to be lasting. By contrast, the plague of 1347-51 changed Europe's economy forever. It killed around 90% of the infected. On current estimates, COVID-19's claims are somewhere between the normal flu and about 3% of those afflicted. This is nowhere close to the plague, nor will its consequences be, however much we panic.

RANGANATHAN SIVAKUMAR

■ COVID-19 is fast spreading its tentacles all over the world. With even developed countries like the U.S. struggling to contain the pandemic, social distancing and self-quarantine seem to be the best control measures. In this context, it is interesting to recall some traditional practices followed in Kerala. Whenever a death used to occur, the immediate family members of the deceased had to go through a period of mourning which lasted 16 days called *Pula*. During this time, the relatives of the dead were not allowed to leave the house nor were outsiders encouraged to visit. Family members were given only frugal vegetarian food. The practice was an excellent example of social distancing, as in those days many deaths were from infectious diseases like cholera, smallpox and plague. *Pula* enabled the possible containment of the disease. As we know today, the 16 days coincide with the

incubation period of many pathogens.

D. SETHURAMAN

■ The cover story was absorbing. It was surprising to find startling and striking similarities between the two pandemics, the plague of 1348 and the coronavirus of 2020. The most astonishing factor is that the plague prevailed from March to July and the coronavirus also became severe in March, but let's pray it does not extend up to July.

Model state

■ I read the 'Field Notes' piece ('State of efficiency', Mar. 29) with a little pride. The way the little State of Kerala overcomes calamities is a model to the whole world. The presence of a courageous, humane chief minister sets Kerala apart. His instinctive crisis management skills are evident. During this lockdown, he ensured that even street animals do not starve. Migrant workers were renamed as guest workers. Yes, Kerala is leading the way.

SHIBLI SADDAM



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Doctors at the vanguard

Health personnel face patients with infections, even if hospitals do not have masks and sanitisers

RISHI KANNA

It's in the family

Joint families help boost emotional quotient, though not everything is hunky-dory in such a set-up

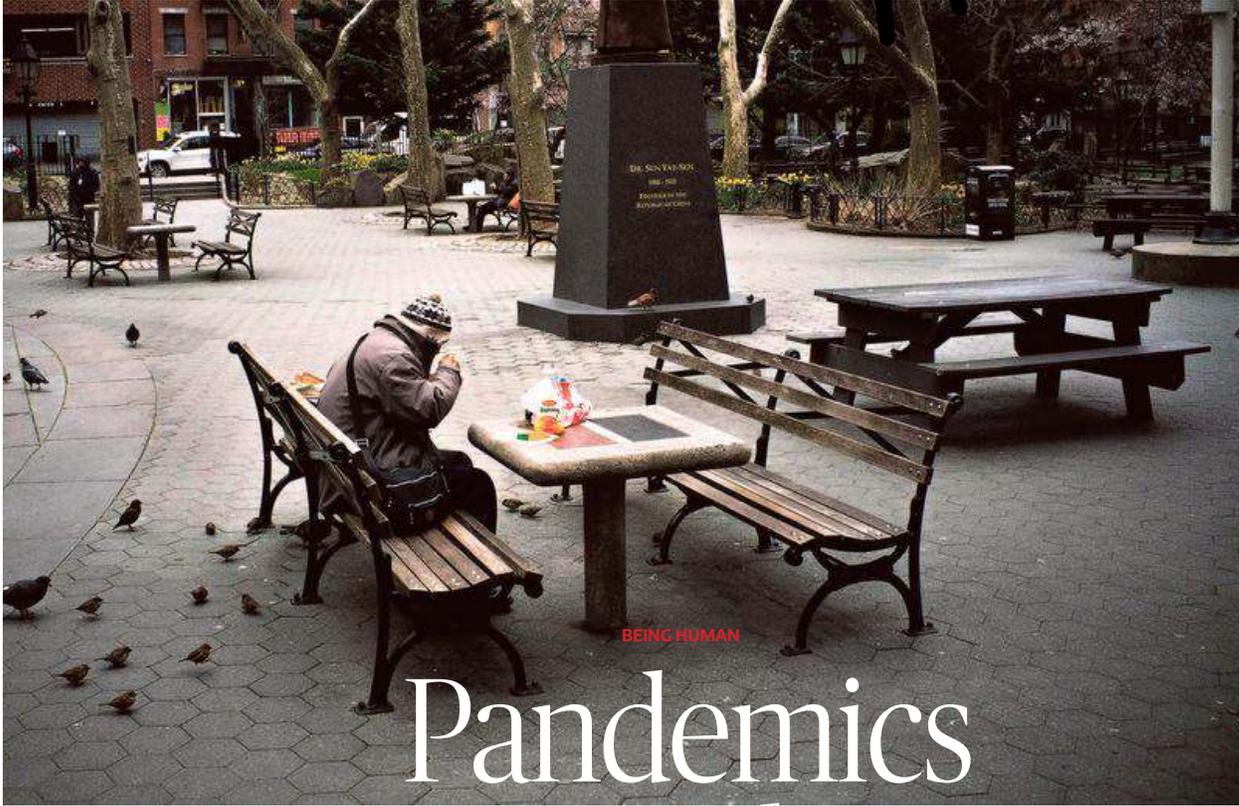
PARTHA PRATIM MAZUMDER

The social media trap

The more you get entwined in its grip, the more you will find it difficult to extricate yourself from it

G. VENKATESH

This page consists of reader submissions. Contributions of up to a length of 700 words may be e-mailed to openpage@thehindu.co.in. Please provide a postal address and a brief background of the writer. The mail must certify that it is original writing, exclusive to this page. The Hindu views plagiarism as a serious offence. Given the large volume of submissions, we regret that we are unable to acknowledge receipt or entertain queries about submissions. If a piece is not published for eight weeks please consider that it is not being used. The publication of a piece on this page is not to be considered an endorsement by The Hindu of the views contained therein.



Pandemics and prejudice

Diseases don't care for race or class. But whenever there is a pandemic, deep-rooted social prejudices resurface

Amitangshu Acharya

In the early 1900s in New York, a strange event took place in the upscale enclaves of Long Island. Many of its denizens began to mysteriously contract typhoid. The emergence of a disease associated with filth and poverty in a slick and affluent quarter deeply unsettled the city's medical establishment.

A sanitary engineer named George Soper was asked to investigate the phenomenon. He discovered that a cook named Mary Mallon, a middle-aged Irishwoman, had worked for at least eight of the families that had been attacked by typhoid. Mallon, herself perfectly healthy, would leave her employment each time a case broke out and move to another family. Soper set off on a hunt. He traced Mallon's whereabouts, stalked her to find where she lived, and finally confronted her, accusing her of being a carrier of typhoid. When Mallon refused to cooperate and undergo medical tests, Soper convinced the police to arrest her.

Incarcerated purely on a hypothesis, Mallon's blood, urine and faecal samples were then collected against her will. When the results came back, they showed the presence of *Salmonella typhi*, the bacterium that causes typhoid, and the noose of public disapproval quickly fell around her neck.

Soper was celebrated for having established the existence of 'healthy carriers' – people who carry and spread disease-causing pathogens but stay unaffected. Mallon was disgraced and went down in history as 'Typhoid Mary'.

For decades, that unkind moniker normalised the violence and vilification of a poor, illiterate, immigrant woman, who was also a passionate and gifted cook. Mallon was demised by the medical establishment and the press as a 'super-spreader', akin to a mass murderer. She was believed to have infected 51 people, three of whom died, but exact numbers were difficult to establish.

Finding the enemy

Mallon was sent into quarantine for 26 years, next to the Riverside Hospital on North Brother Island, where she finally died in 1938. An impassioned exonerator came 63 years later, from an unexpected yet unsurprising quarter. In *Typhoid Mary: An Urban Historical* (2001), the late Anthony Bourdain wrote with great empathy for his fellow chef: "Cooks work sick. They always have. Most jobs, you don't work, you don't get paid. You wake up with a snuffle and a runny nose, a sore throat? You soldier on. You put in your hours. You wrap a towel around your neck, and you do your best to get through. It's a point of pride, working through pain and illness."

Typhoid outbreaks were not new to New

York City, but Mallon had been singled out as a public enemy, more deadly than the disease itself. Her true crime, perhaps, was reminding the rich and powerful that pathogens had little respect for the class divide that separated Long Island from the Bronx.

The story of people and pathogens is that of a difficult evolutionary marriage. Pathogens want to live and prosper. Killing off humans – the hosts – would become a self-defeating exercise. Both parties, therefore, try to work towards mutual survival. After a certain point in time, the two declare an uneasy truce and humans start to live with the pathogen. We have done so many times before, and we will do so with the novel coronavirus.

The biological coexistence that emerges out of a pandemic is in stark contrast to its social effects. Diseases don't have a social preference, and pathogens don't distinguish victims by race, class, religion, gender or other identities. However, history shows that each time there is a pandemic, deep-rooted social prejudice resurfaces, often with horrifying results.

During the Great Bubonic Plague in Europe in 1348, the Catholic Church was convinced that the Black Death was a Jewish conspiracy to undermine Christianity. Accused of

poisoning wells to spread the disease, Jews were subjected to horrific torture and forced to make false confessions. Soon, the mephitic smell of the burning flesh of thousands of Jews lingered in the air of Strasbourg, Cologne, Basel and Mainz.

The Roma of Europe faced similar persecution. Giorgio Viaggio, in his book *Storia Degli Zingari in Italia* (1997), has documented 121 laws framed in Italy between 1493 and 1785,

restricting the movement of *Zingaris* (a pejorative term for Romas). Such laws were driven partly by the prejudiced view that the Roma people caused and spread epidemics.

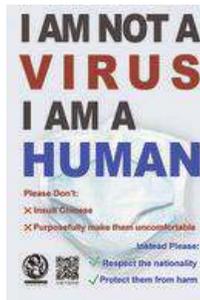
In medieval Europe, outbreaks of plague were blamed on people who practised traditional medicine. They were branded 'witches' and persecuted. Historian Brian Levack (2006) estimated that 90,000 people were punished for witchcraft in Europe. Though we don't have exact figures, the brunt of it seems to have been borne by women.

The medieval belief in plague spreaders was dispelled with the arrival of germ theory. Diseases were spread not by people but by micro-organisms or pathogens. They could travel through air, water or physical contact between humans and non-humans. We learnt that germs had no regard for social categorisations. One assumed that the discovery of this apolitical and amoral 'germ' would lead to epidemics being seen through the clear lens of a microscope and not by glasses tinted with prejudice.

But the microscope was not only an instrument of discovery; it was a tool of the Empire. The tropics were teeming with diseases, detrimental to the health of Anglo-European administrators. Mosquitoes, it seemed, were far more insidious than colonial subjects. It was the microscope that shaped the colonial understanding of "tropical disease". The outbreak of Asiatic cholera in 1817 – a pandemic named because it was believed to be endemic to India's Gangetic region – soon spread to Europe and sparked fears of an invasion of diseases originating in the colonies.

This prompted intense scientific enquiry. In his nuanced account of the attempt of 19th-century medical science to localise diseases, historian Pratik Chakrabarti writes in 2010 of how Robert Koch's discovery of *Vibrio cholerae* – the comma-shaped cholera pathogen – was pinned to the tropical environment and body. Specifically, the intestine and biliary tract of the colonial subject.

Then there was leprosy, so stigmatised that the word 'leper' became synonymous



During the Great Bubonic Plague in Europe in 1348, the Catholic Church was convinced that the Black Death was a Jewish conspiracy to undermine Christianity



Stigma (Clockwise from above) Chennai Corporation workers paste stickers outside homes of quarantined patients; the vandalised door of a Chinese restaurant in Glasgow; a train passenger is stamped for home quarantine in Guwahati; a poster made by Chinese students of Southampton University; a solitary man eats at a park in NYC's deserted Chinatown; and migrant workers in Chennai queue up for food at a relief centre. • R. RAVINDRAN, AFP & PTI

If colonial science contributed to the tropicalisation of epidemics, literature reified it. Thomas Mann's novella *Death in Venice*, set in the city of water during a cholera outbreak, described the disease as 'Indian cholera', which, "...born in the sultry swamps of the Ganges delta, ascended with the mephitic odor of that unrestrained and unfit wasteland, that wilderness avoided by men..."

with a social outcast. The *Manusmriti* mandated the ostracisation of lepers as 'sinners'. Even after the Leprosy Commission report in 1891 concluded that the "amount of contagion is so small it may be disregarded," Indian and European upper classes actively campaigned against allowing the afflicted to be seen in public, as their sight produced disgust and loathing. This led to the Leprosy Act of 1898, which institutionalised people with leprosy, even using gender segregation to prevent reproduction. All to please the aesthetic sensibilities of the colonial elite.

If colonial science contributed to the tropicalisation of epidemics, literature reified it. Thomas Mann's novella *Death in Venice*, set in the city of water during a cholera outbreak, described the disease as 'Indian cholera', which, "...born in the sultry swamps of the Ganges delta, ascended with the mephitic odor of that unrestrained and unfit wasteland, that wilderness avoided by men..."

Epidemic orientalism

Researcher Alexandre White in 2018 referred to such incidents of colonial construction as "epidemic orientalism" in his thesis. This often shaped the way diseases were named – Asiatic cholera (1826), Asiatic plague (1846), Asiatic flu (1956), Rift Valley fever (the 1900s), Middle East respiratory syndrome (2012), Hong Kong flu (1968), to cite a few. Now, the World Health Organisation has guidelines to name infectious diseases in neutral, generic terms.

Socially, however, epidemics and diseases continue to be pinned to race, gender, sexual preference and geography. The Trump administration has repeatedly called COVID-19 the 'Chinese virus', and some refer to it as 'Kung Flu'. Naming reinforces prejudice. The original term for HIV/AIDS was the acronym GRID – Gay Related Immunodeficiency. Though short-lived, it worked to boost what American televangelists were already calling it in the 80s: 'gay plague' – divine punishment for sexual deviance. The belief that HIV/AIDS has a preference for gay men now lives on in legislation in various countries, prohibiting men who have sex with men (MSMs) from donating blood or organs.

If history tells us one thing, it is that we have managed to deal with disease-causing pathogens significantly better than with our entrenched prejudices. Pandemics don't produce hate, but they do serve to amplify it.

The Trump administration would like to believe that the Chinese government's mismanagement and attempts to cover up the incidence and spread of COVID-19 is a conspiracy aimed at destabilising America. It recalls the Catholic Church's invocation of the notion of *pestis manufacta* (diabolically produced disease) to accuse Jews of trying to sabotage Christianity. Similarly, European politicians Le Pen and Salvini's racist invectives against migrants and refugees as carriers of the coronavirus intersects with Trump's rhetoric. During his campaign for the U.S. presidency four years ago, Trump revived the medieval European idea of 'plague spreaders' by claiming, "Tremendous infectious disease is pouring across the border" carried by Mexican immigrants. Ironically, it is Mexico today that's guarding its borders from carriers entering from the U.S.

India's latent prejudices have similarly risen in tandem with COVID-19. Building owners have barred entry of medical staff into their own homes. People speak of social distancing using the terminology of caste and untouchability. People from Northeast India are facing racist comments and threats of eviction. The same government that sent planes to ferry Indians back from foreign countries failed to house its poor migrant labourers or to send them safely home. The ongoing lockdown has seen a mass exodus of workers, trekking hundreds of kilometres to get home, sleeping on streets, struggling for food and water. Some 20 have died so far. As this goes to press, governments are scrambling to set up relief camps for those persuaded to stay back, and transport those who insist on leaving. And in U.P., returning workers are hosed down with surface disinfectants as if they were the pathogens. Added to this, communal prejudice has found new viral spread, riding piggyback on the Tablighi Jamaat conclave in New Delhi's Nizamuddin area.

Science was supposed to liberate people from irrational beliefs by proving that pathogens don't look for a particular race or place – all they need is a human body, warm, moist and nutrient-rich. Unfortunately, even the scientific understanding of hosts, vectors and carriers has been appropriated to reinforce social prejudices.

Stigma produced in the churn of a pandemic has a long afterlife. No one understood that better than Mary Mallon. Quarantined for more than a quarter of her life, her name is still synonymous with disease.

The same aggressive hounding of the afflicted persists today. Desperate to maintain quarantine, governments are publishing patient names and addresses, affixing door stickers, stamping their skin with indelible ink, all of which violate medical ethics and could lead to social ostracism.

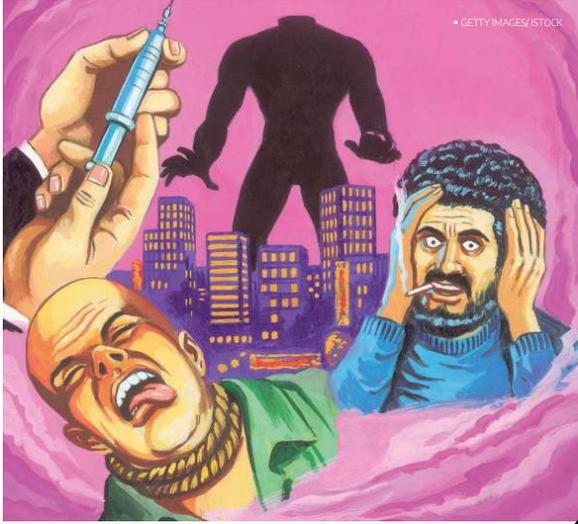
And we stand today facing the same question a poor, immigrant woman asked of society at the beginning of the 20th century. Is it necessary to forego humanity in order to save human life?

The writer is a Leverhulme Trust Ph.D Scholar at University of Edinburgh, U.K., and a Fellow at Konrad Lorenz Institute, Austria.

THRILLER

Delightfully meandering mystery

As this latest novel proves, Mukherjee has made quite a mark in his chosen retro genre of the Christiesque murder mystery



Death in the East
Abir Mukherjee
Harvill Secker
₹599

The monks suggest he pass time with books. 'Reading broadens the mind.' To which the stiff-upper-lipped Wyndham wryly responds, 'So does opium'

Zac O'Leah
Assam, 1922. Sam Wyndham is on leave from his job with the Calcutta police to recuperate in the quaint Khasi hill station of Jatinga; not in its posh clubhouse but in an ashram treating addicts through the tough regime of a week-long vomiting cure. The monks suggest he pass time with books. "Reading broadens the mind." To which the stiff-upper-lipped Wyndham wryly responds, "So does opium."

Do or die
But then a ghost from the past — 1919 — appears in this novel that's skillfully woven around flashbacks of an inconclusive, botched locked-room-murder investigation involving Wyndham's first love, Jessie as its victim). The crime scene: London's East End, a million dingy White-chapel public houses and once-squalid streets like Brick Lane (now beg destination for curry outings), forms an extremely evocative backdrop to a high-stakes drama.

It would be an understatement to say that the once-promising constable Wyndham, now Captain of the CID, ended up in India in 1919 because he was at a loose end and scarred by the Great War. He admits to himself at a central moment, "My wife was dead, as were my family, most of my friends and the better part of my soul. I'd come to Calcutta because it was a better option than

suicide..." Now, in a remote colonial outpost in India's northeast, he finds an opportunity to redeem himself — or die.

He meets a new female fatale in Jatinga — "We might be created in the image of the female, but some of us were clearly closer to the original than others." Naturally, what follows is a new locked-room-murder echoing the opium 1905. This makes for a delightfully meandering novel with a classically symmetrical, very unlike the instantly purposeful thrillers of today that offer little linguistic joy or existential nourishment.

Or as Wyndham broods: "They say the human mind seeks to make sense out of chaos. How much easier it was to simply ascribe these things to the fates or the gods than to face the truth: that the universe was a callous, capricious place, where bad things happened to good people because there was no good reason why they shouldn't."

Period details
Abir Mukherjee has had a meteoric rise, with four books over the last four years, translated into 15 languages. His multi-laurelled debut in 2016 — aptly called *A Rising Man* — was set in Calcutta in 1919, a city of enormous riches where Wyndham, India greenhorn, is tasked with a politically sensitive investigation at a tumultuous time when calls for independence were growing louder. He teams up with the only Indian detective in the colonial police force, 'Sur-

render-Not' Banerjee, who becomes a sidekick-like fixture. This was followed by *A Necessary Evil*; set a year later, it takes readers to the exotic world of maharajahs and sordid feudal oppression.

The energetic novelist needed only another year to bring out *Smoke and Ashes*, in which Wyndham is a full-blown addict (which pre-figures the novel under review) and its plot is woven around Calcutta's opium dens. This literary project clearly has epic dimensions as well as important socio-historical relevance — analysing the late-Raj era — and has attracted multiple awards, shortlistings and longlistings, while instalment #5 is already in the works.

It's interesting that Mukherjee makes his mark in such a retro genre — but then again not surprisingly, considering how Sherlock Holmes and Miss Marple remain bestsellers in India and have been mined for ideas by the likes of Satyajit Ray and Kalpish Ratna, respectively. Mukherjee opens with an epigraph from Conan Doyle's *Hound of the Baskin* and ends by hoping this latest offering contains "a slant of murder that might have made Agatha Christie proud"; and ends in those English penny-dreadfuls of yore (in marked difference from the American noir that developed as its counterweight), death largely happens off-stage, the murder methods are contrived, and the scarce dramatic set pieces tend towards melodramatic slapstick.

Maybe this is attributable to Christie's preferred dainty approach to hard-boiled stuff and Sherlock's armchair-detecting; they simply left no template for epigones to emulate when it comes to writing action scenes. In Mukherjee's bygone world, the rookie bobby out chasing suspects crawls into a bathhouse through a window at night only to fall flat on his face, lose his revolver in the dark, and stumble about like a lunatic playing hide-and-seek with himself, until he gets caught by villains with Germanic accents who waterboard him. Another time, other villains cosh him and he wakes up tied to a chair... Fun, but it does shatter the realism.

Yet there's a greater artistic purpose behind Mukherjee's dishing up rose-tinted nostalgia for an India in which curved haggis once featured on menus. The preference for Chappinesque violence apart, Mukherjee has a rarely faltering ear for genuine-sounding dialogue, period details feel authentic, and I'd say his prose suits Christie's. And, unlike her, he displays a morally guided political conscience that her ilk lacked (because no such notions existed then in British drawing rooms). No doubt he's going to be one of the most successful Indian writers of the 2020s.

The writer is a detective novelist based in Bengaluru.



"Happy city" A cover of one of the French editions of the book. • SPECIAL ARRANGEMENT

REPRISE

La Peste by Albert Camus

Sudipta Datta

When *La Peste* (*The Plague*) was published in 1947, it was read in part as an allegory of France's plight under Nazi occupation during the Second World War. The fable, set in the North African coastal city of Oran in 1941, leads people — doctor, priest, magistrate, journalist, rich, poor, man, woman, insider, outsider — to react individually and collectively in different ways to an epidemic of plague. Seventy-odd years later, the novel seems startlingly real in the context of the global spread of the coronavirus, and the human tragedy that is unfolding across the world.

Moral pestilence

The story begins on a spring morning with Dr. Bernard Rieux feeling something soft under his foot while leaving his surgery — it's a dead rat lying in the middle of the landing. Soon on his rounds he sees rats everywhere, some dead, others alive, and one of his patients who has asthma wryly comments: "they're coming out, have you noticed?" People start dying, local authorities reluctantly announce it's a plague and the "intrinsically ugly" city is quarantined. The coming of the rats may be taken to echo any of the moral or literal pestilences that visits the world from time to time: "It was as though the very soil on which our houses were built was purging itself of an excess of bile, that it was letting boils and abscesses rise to the surface which up to then had been devouring it inside."

The reluctance of the municipality to call out the disease

matches the reaction of the majority of the people, as the narrator notes: "Everybody knows that pestilences have a way of recurring in the world; yet somehow we find it hard to believe in ones that crash down on our heads from the blue sky. There have been as many plagues as wars in history; yet always plagues and wars take people equally by surprise."

The people "wrapped up in themselves" are convinced that it can't be happening to them. Only when the gates are shut, and nobody can arrive or leave, reality dawns: "...the first thing that the plague brought to our fellow citi-

Courage, fear, anxiety, selflessness, selfishness — all aspects of human nature are acutely observed in the time of great despair

zens was exile," and being separated from loved ones was the "greatest agony of that long period of exile."

Rieux also suffers from a separation as his ailing wife is away at a sanatorium. He may have been sick and tired of the world he lived in, but he goes about tending the sick as if he "had much liking for his fellow men and had resolved... to have no truck with injustice and compromises with the truth." The priest, Father Paneloux, initially sits on judgement: "My brethren, you have deserved it," but later joins the fight against the plague.

Common decency

The journalist, Raymond Rambert, who had been commissioned by a leading Paris daily to write on the living conditions pre-

vailing among the Arab population, is cut off from his wife in Paris, and tries to leave the quarantined city by hook or by crook. He is so taken up with his loss that he doesn't report the unfolding tragedy and the hundreds dead. But eventually, he realises that though he doesn't belong to Oran, the city's fate is tied to him and he joins the band of "health workers." Courage, fear, anxiety, selflessness, deprivation, selfishness — all aspects of human nature are acutely observed in the time of great despair.

In his introduction to a new translation, Tony Judt writes that for Camus, as for Rieux, resistance was not about heroism at all — or, if it was, then it was the heroism of goodness: "...the only means of righting a plague is by common decency." Judt argues that in the novel, "it was not 'fascism' that Camus was aiming at — an easy target, after all, especially in 1947 — but dogma, compliance, and cowardice in all their intersecting public forms."

When he got the Nobel Prize in 1957, the Academy said Camus' work "illuminates the problems of the human conscience of our times." In *La Peste*, when people erupt in joy as the disease wanes, Rieux wishes they knew better: "that the plague bacillus never dies or disappears for good; that it can lie dormant for years and years in furniture and linen chests; that it bides its time in bedrooms, cellars, trunks, and bookshelves, and that perhaps the day would come when, for the bane and the enlightening of men, it would rouse up its rats again and send them forth to die in a happy city."

The writer looks back at one classic every month.

SOCIAL REALISM

Hungry yarns

In Radhakrishna's descriptions of village life lie her strengths as a novelist

Navmi Krishna

Textile activist Sabita Radhakrishna's novel, *The Looms of Arivoor*, is a compelling attempt to drive home the current predicament of traditional weavers. Retired IAS officer and handloom aficionado Tilak doesn't want the weavers to become part of a government cooperative, which he believes will stymie their creativity. This starts a battle of will between him and his friend, master weaver Kulasekhara. For the weaver community, hunger is more urgent than artistic freedom, a fact that seems to be lost on Tilak. How the two parties deal with this dilemma unfolds in this short read.

Tilak and Kulasekhara may well be the protagonists, but it is mostly the women of Arivoor, a fictional village in the outskirts of Chennai, who drive the story. Sundari, Tilak's wife, and Ponni keep the wheels

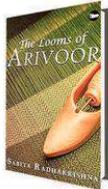
turning for their families. Of the two, Ponni is handed the rough end of the stick. She laments at one point that she, the wife of the master weaver, has to live off Sundari's amma's hand-me-downs, and you cannot help but feel for her.

The Looms of Arivoor lays bare the contrast in priorities of the haves and have-nots. For all of Tilak's talk about being Kulasekhara's lifelong friend, their relationship never rises above that of a benefactor and beneficiary, defined by their social realities.

The village of Arivoor is teeming with fascinating characters, and it's a shame that we get to know so few of them. The ones we do meet rarely get a chance to reel us into their lives, disappearing instead

with scant regard for closure. For instance, Alamelu, the gorgeous — and starving — wife of one of the weavers and one of the more memorable characters, gets less than her due. Khurshed, Tilak's college flame, gets a parallel storyline with a lot of potential but it gets an unimaginative and predictable ending.

Radhakrishna's descriptions of village life are a delight. Her rein lies her strength as a novelist, as opposed to dialogue-writing, which is laden with dramatic outbursts and feels more suitable for a play. In fact, the novel has been adapted from Radhakrishna's play, *Song of the Loom*. Her background as a food researcher shines through as does her passion for the textile industry, combined, they light up the most mundane scenes.



The Looms of Arivoor
Sabita Radhakrishna
Bigfoot Publications
Pvt. Ltd.
₹225

MURDER MYSTERY

Mrs. Tweedy sniffs around

With its Raj-era setting and characters, this one's meant for the old-fashioned whodunnit aficionado

R. Krithika

The way Bulbul Sharma's latest book begins, the last thing you would expect is murder and mayhem. It opens with a lyrical description of the heat in the plains, contrasting it with cool Shimla and moves on to introduce Mrs. Tweedy and Inspector Duggan. It is pre-Independence era, with World War II raging in the background. That chaos doesn't seem to have touched the lives of the British citizens in Shimla, where tea and dinner parties and gossip sessions continue unabated and the next major excitement is the Viceroy's Ball.

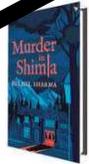
Then a young woman is found dead right in the house of the Assistant Commissioner of Shimla Hills, William Parker-Smith. Nobody seems to know who the murderer is. She had walked to bring dinner the previous evening bearing a note from a common friend. While most of the house guests are indifferent to the death, it seems to have a major impact on Parker-Smith's wife, Helen.

Inspector Sen, who is initially put in charge of the case, is intrigued by the ensemble cast in the house and the fact that his head office in Delhi seems to want this case shoved into the bin. Despite the

warnings of his superior, he continues to sniff around. Meanwhile, Mrs. Tweedy, who writes romantic fiction so that she can continue to stay on in India, is also on the job, chatting with members of the household and offering Sen some leads. Am I the only one being reminded of Miss Marple and Inspector Dermot Craddock here?

The only person in the house who cares enough to help the inspector is Mary, Parker-Smith's niece. On a visit from England, Mary finds the callousness with which the others in the house treat the murder most upsetting. Her unwitting probing leads her to the truth. Or shall we say, truths?

The resolution, when it comes, is highly satisfactory. This is a must-read for fans of old-fashioned whodunnits.



Murder in Shimla
Bulbul Sharma
Speaking Tiger
₹399

BROWSER

The Loneliness of Hira Baruah

Arupa Patangia Kalita
Macmillan
₹499
These short stories are of people living ordinary lives in Assam in times of prolonged socio-political disturbance. The sketches by the Sahitya Akademi winner deftly blend social realism with magic realism and folklore.



Eight Perfect Murders: A Novel

Peter Hanson
Penguin Morrow
₹27.99
Biblio mystery meets thriller in this story of a bookseller being investigated by the FBI because a killer seems to be following his list of the most ingenious fictional murders. The killer seems to know the bookseller intimately, even the secret he has kept hidden from everyone.



Rose Bullet

Amrish Shah
Tara Press
₹299
A British journalist, Jannat Gill, is on an assignment to investigate the increasing number of NRI murders in the heart of Punjab. There she encounters Rajveer, the flamboyant son of the soil managing the family business, and falls dangerously in love.



The Other Bennet Sister

Janice Hadlow
Henry Holt and Co.
₹575.00 (Kindle price)
This is the story of Mary Bennet, the marginalised middle daughter from *Pride and Prejudice*, the plain Jane who takes refuge in books. In true Austen fashion, Mary must accept herself for what she is before she can allow herself to acknowledge love.



EXPERIENCE

Reading the tea leaves

Two writers recollect the rhythm of life at a tea garden in South India

Indrani Dutta

At a time when the Indian tea industry is passing through a crisis which seems to be more structural than cyclical, *An Elephant Kissed my Window* with its anecdotal narratives from tea lands provides as refreshing a break as does a steaming cup of the amber brew after a hard day's work.

Born in the year India gained Independence, M. Ravindran, one of the co-authors, joined a British-owned plantation company near Ooty, traversing through the tea-growing regions of the Nilgiris, Anamalais and Meghamalai till the turn of the century. His co-author Saaz Aggarwal whose own life was intertwined with plantation life, has woven in context, fleshing out memories from Ravindran and others, while also including her own.

Brown sahibs

The result is a 269-page compendium of personal recollections, excerpts from gazetteers' journals and photographs. It documents how the brown sahibs stepped into the shoes and the lifestyle of the British who started departing from the tea industry which they had started in the mid-1830s.



An Elephant Kissed my Window
M. Ravindran, Saaz Aggarwal
B&W
₹500

"While the label brown sahib is not always considered a complimentary one, it must be said that much of what we inherited was solid, value-based and stood us in good stead," he writes, mentioning a 'user's manual' – a handyman's guide which offered advice on agriculture and pest management for the planter. A thick calico-bound book, it was too precious for borrowing to be permitted, he says.

This and many of the other writings come from Ravindran who joined the plantations as a trainee assistant manager. He talks of the 'excruciating loneliness and homesickness' he suffered in an alien climate and environ. He was at an estate called Prospect which was then one of the most prestigious tea factories in South India. His plight may ring a bell with many a planter of yesteryears.

Through his almost diary-like entries we come to know of the visit of Mada Gowda, the plantation inspector who checked for compliance with provisions of the powerful Plantation Labour Act. This sort of governance seems lacking now with many tea companies becoming recalcitrant about labour welfare. As Ravindran learns his job, it becomes the reader.

Elephants for company

The eponymous pachyderm does cross the readers' path many times in the book. And no, they do not only kiss windows and go away. At times they guard the lives of young couples caught in the jungle in a car with a flat tyre and they even trample a pet dog.

Saaz Aggarwal's reminiscences enrich the book through endearing anecdotes of how she and her brother would quarrel and pull each other's hair to distress during their long and arduous journey to and from school and the estate bungalow.

While books on the Assam and the Darjeeling tea industry are easier to find, the authors need a round of applause for this volume. The aroma of the strong-bodied South Indian teas wafts around long after the last chapter has been read.

The reviewer is an independent Kolkata-based journalist.

SOCIETY

Have plumbers, need architect

Seeing economists as 'plumbers', Abhijit Banerjee and Esther Duflo show how economic reasoning and evidence can shed light on global issues

Jean Drèze

John Maynard Keynes, the founder of Keynesian economics, once said that "if economists could manage to get themselves thought of as a humble, competent people, on a level with dentists, that would be splendid." Judging from recent opinion polls, economists still have a long way to go. According to one poll, cited in this book, 84% of people in the U.K. would trust the professional advice of a nurse, but only 25% would trust an economist.

The aim of this book is partly to demonstrate the value of 'good economics', and partly to bring economic reasoning to bear on the critical issues of our times – poverty, inequality, trade, migration, climate change, among others. Rather than dentists, Banerjee and Duflo think of able economists as plumbers who patiently "solve problems with a combination of intuition grounded in science, some guesswork aided by experience and a bunch of pure trial and error". Sure enough, their preferred tool of trial and error is the randomised controlled trial, but

they also make healthy use of other types of evidence.

Joining the dots

The result is convincing in many ways. In fact, the book is a model of how economic reasoning and evidence can shed light on real-world issues. The authors excel at joining the dots from numerical, theoretical and empirical studies. The arguments flow like clear water. Written in an engaging style, the book makes economics accessible to a wide audience who would have thought that the Stolper-Samuelson theorem had so much to offer?



Good Economics for Hard Times: Better Answers to Our Biggest Problems
Abhijit Banerjee, Esther Duflo
Penguin
₹699

The book is divided into nine thematic chapters on some of the leading issues of today's 'hard times'. On migration, the authors dispute the alarmist narratives and argue that, far from being a major threat, migration should be welcome if not encouraged.

A fine chapter on international trade reminds us that there are 'pains from trade' (for some people at least), not just gains as many economists tend to think.

The chapter on economic growth aptly sums up our ignorance and

concludes that it is better to improve the quality of life with the resources we have than to pretend that we know how to accelerate growth. Some chapters (notably on climate change) are a little inconclusive, but others end with a clear message, often as higher taxes on the super-rich to reduce income inequality.

The book ends with a long but not entirely convincing chapter on social policy. For developing countries, the authors support some sort of 'universal ultra-basic income' (UUBI). The basis of this recommendation, however, is not clear – one is at a loss to understand the statement "we are in favour of a UUBI based on what we know so far" (p. 296). For one thing, much would depend on how UUBI is to be financed. The authors note, apparently in approval (p. 295), that in India 1.38% of GDP could be mobilised for UUBI by removing 'the ten largest central welfare schemes', without mentioning what these are. As it happens, they include valuable programmes like school meals, the Integrated Child Development Services and the National Rural Employment Guarantee Scheme. There is a gap in the argument to say the least.

Clues to the future

At the end of the book, the reader certainly feels wiser, but not necessarily clearer about what should be

done to address the big issues of our times. For all its 'revolutionary' character, advertised on the cover, the book is a little short of clues on the way forward. Instead, it ends with a somewhat rhetorical 'call to action'.

A little enigmatic

Here we seem to encounter the limits of 'plumbing'. To fix a water tap, informed poking around may be good enough. But to build a house, you need to think hard about what sort of house you want. That is not just a matter of technical knowledge, but also of normative judgement as to what we are trying to achieve and for whom. Banerjee and Duflo remain a little enigmatic in that respect. They certainly want the world to be a better place, but it is not clear what that place would look like, other than having less poverty and nastiness. I am sure that they have an answer, and I am hoping that we will hear it one day – perhaps in their next book.

Meanwhile, *Good Economics for Hard Times* has much to offer. It is always difficult to recommend good books on economics to a layperson who wants to educate herself without getting bored – this one is a safe bet.

The author is Visiting Professor at the Department of Economics, Ranchi University.

Let it be
Farmers migrate with their families from Madhya Pradesh to Nagpur, in search of jobs.
S. SUDARSHAN



CULTURE

At home in the world of the Halakkis, Konyaks, Marias

An immersive study of tribal life with all its varied shades offers a wide-ranging perspective about people in the margins

Anusua Mukherjee

Think 'isolated tribes' of India and the images that will present themselves will probably be of labour-hardened men and women protesting with bows and arrows; JCBs throwing up the red earth of their homes; video clips of scantily-clad Jarawa women dancing for the delectation of tourists – in short, stereotypical images that frame them as 'museum pieces' (as one Andamans' MP memorably described the Jarawas) and present their problems in a suitably picturesque way for getting the sympathetic but safely distanced touch from the mainstream.

To go behind the scenes and see

the tribals as animated figures with joys and problems that are universal but also particular to their circumstances and history, one must read Nidhi Dugar Kundalia's *White as Milk and Rice*. Her 'humble attempt to not bring this margin to the centre, but to make the margin a place of reality' is a richly in-depth study of tribal life, not viewed from the outside, but felt from within.

Letting women speak

Kundalia achieves this by employing that oldest of methods – storytelling, which tunnels into the mind of the subject and sees the world through her eyes. Of course, it's not a foolproof method for objectivity – nothing is.

One can guess Kundalia's in-

ings – she lets the woman speak most of the time; the narrations overturn the notion of the tribes as less civilised, recording how robustly avant-garde some of their social customs are (the Marias of Bastar, for instance, 'believe in the primordial authenticity of lust'); there are seemingly innocuous vignettes of people in positions of power, like the havaladar who 'nods along, never looking up from the potato-stuffed kachoris' when the sarpanch comes to lodge a complaint of robbery in his village.

But there are counter-attacks: the narrators are women and men; some tribal customs, like that of head-bumping among the Konyaks of Nagaland, are anachronistic and inadmissible; if the havaladar is not too attentive towards the sarpanch's

plea, the sarpanch's claim to meek powerlessness has the havaladar recalling a sower who was whipped by this sarpanch. This jangle of perspectives makes for a 360-degree view. The only side that gets no sympathy is the state, which has always harmed the tribes, not by being paternalistic or by pushing them out of their lands for development's sake.

Forest dwellers

Kundalia's stories are of the Halakkis of north Karnataka; the Kanjars of Chambal; the Kurumbas of the Nilgiris; the Marias of Bastar; the Khasis of Shillong; the Konyaks of Nagaland. A member of each tribe lets us into their lives: the narratives, however, are not representative of the

views of the entire tribes. The sketches, even of the Kanjars, the forest yangbonds, are as the dacots of yore, so skillfully executed that you start thinking like them, with them.

Unsentimental portraits

And yet the portraits are unsentimental: when a Kanjar bride is thought to have failed the virginity test, they burn her alive; animals are getting sparse in the forests around the Konyak villages – 'most of them already hanging as skulls on the walls' of the tribal homes.

That said, some of the portraits (like those of the Kanjars and Marias) are more convincing than the others. This disparity is a result of the narrative technique: who are the

protagonists – are they real individuals, stand-ins for the author or fictive beings? Kundalia doesn't specify. When the protagonists are powerfully imagined, the stories acquire authenticity and when they are not (as with the Khasis and Konyaks), a vagueness takes over, making the portraits tilt more on the side of fiction than non-fiction.

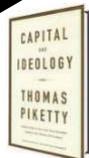
Cavils notwithstanding, *White as Milk and Rice* drew me in like that seminal work of anthropology, Lévi-Strauss's *Tristes Tropiques*. Not the least because of its language, which is as effortlessly lyrical. 'In the Gondi language of the Marias, there is no future tense because their lives function around the availability of the natural resources around them: land, forests and water.'



White as Milk and Rice: Stories of India's Isolated Tribes
Nidhi Dugar Kundalia
Ebury Press
₹399

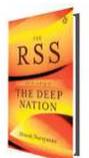
Capital and Ideology

Thomas Piketty
HUV/HarperCollins
₹2,499
In his follow-up book to *Capital in the Twenty-First Century*, Piketty argues for a new 'participatory' socialism, a system founded on an ideology of equalising social property, education and the sharing of knowledge and power. It is a bold proposal for a new and fairer economic system.



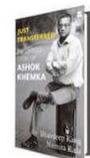
The RSS and the Making of the Deep Nation

Dinesh Narayanan
Penguin Random House
₹599
Relying on original research, interviews and analysis of current events, Narayanan traces the RSS's roots. It may have been banned twice but with political power, the RSS is going all out to embed its ideology in India's genetic code.



Just Transferred

Bhavdeep Kang, Namita Kala
HarperCollins
₹599
Ashok Khemka has been in the IAS for 27 years and during that time has faced 53 transfers. Throughout his career, Khemka has suffered at the hands of his political masters for his refusal to compromise. Two journalists offer an insider's view of India's administrative machinery.



My Girlhood

Taslima Nasrin
Hamish Hamilton/Penguin
₹599
Set in the backdrop of the Bangladesh Liberation War of 1971, this book recollects Taslima Nasrin's early years. Her memories alternate between scenes of violence, her pious mother, the trauma of harassment and a journey that redefined her world.



FIELD NOTES

The lockdown has made the aged and those with mental illness especially vulnerable to psychological stress

I am a rock, I am an island

by **Veena Rahman**

A review published recently in *Lancet*, which studied literature on the psychological impact of quarantine, found proof of a range of conditions

It is past noon and Mehtaj, 39, a teacher in Assam, is doing her "second round of disinfection". Wiping her car keys with antiseptic, she says, "I can't stop thinking about coronavirus and whether we've let it in by mistake. I am petrified."

The teacher and mother of one is not alone in her phobic reaction. The isolation and fear in this lockdown era is driving an escalating nervousness among many people. Not just those with pre-existing conditions like anxiety, depression and OCD (obsessive compulsive disorder), but also the elderly who are struggling with new levels of loneliness and helplessness.

"I try not to read all the WhatsApp forwards," says Mehtaj, even as she obsessively continues to disinfect door knobs, furniture and kitchen appliances. "I wash my son's toys in Dettol; I put everything in the sun, even vegetables and groceries." As this goes to press, 16 people have tested positive for coronavirus in Assam.

In her apartment in east Bengaluru, Saroja Chakravarty, 84, lives alone. She has kept herself busy with cooking, cleaning and Netflix. She talks to her daughters over the phone. "But I haven't stepped out of the front door in days," she says. As susceptible as the elderly are to COVID-19, people like Chakravarty are

also acutely psychologically vulnerable at this time. "I miss talking to real people. I miss my walks," she says.

Topsy-turvy times

"These are strange times," says Prati-ma Murthy, head of department, psychiatry, at the National Institute of Mental Health and Neurosciences (NIMHANS) in Bengaluru. "What we generally prescribe for the elderly is social interaction for their emotional wellbeing. And now they've been told the opposite: to physically distance themselves, even from their grandchildren."

As you grow older, says Dr. Murthy, a routine becomes important and any disruption leads to anxiety. In Hyderabad, Zubair Ahmed, 71, and his wife Rahima, 65, find the comfort they drew from their daily walks and chatting with friends all but lost. "It's been seven years since our son left home; but it's only now that we feel lonely," says Ahmed.

A review published recently in *Lancet*, which studied literature on the psychological impact of quarantine – the separation and curtailed movement of people potentially exposed to a contagious disease – during previous epidemics such as SARS, found proof of a range of psychological conditions, from post-traumatic stress symptoms to confusion, anger, depression, stress, insomnia and emotional exhaustion. "Activating your social network, albeit remotely, is not just a key prior-

ity, but an inability to do so is associated not just with immediate anxiety, but longer-term distress," says the paper. Communicating, even remotely, with family and friends, is "essential," it adds.

Invisible enemy

That's what Bonoshree (name changed on request), 25, is trying to do. Diagnosed with depression two years ago, Bonoshree works in a publishing house and lives alone in Delhi. She used to walk or step out for coffee to keep her spirits up; now all that's stopped.

Her worried parents video-call her three times a day. "I have to create a facade to keep them from worrying. But the truth is, I am extremely lonely. I am hardly ever hungry and I can't sleep well." Work keeps her busy in the mornings and a friend checks up on her, "but nothing replaces human connect, you

know," she says. She has reached out to her counsellor to see her through it, it might be worse.

Bengaluru-based psychotherapist Natasha Vijay talks of one of her clients who is struggling to cope with the distress of facing this "invisible enemy". The pandemic has been very hard on this woman, the psychotherapist explains, because all she hears constantly are health warnings and alerts.

Such paranoia can be prevented by communicating the right information about the pandemic, says Sanjeev Jain, professor, psychiatry, at NIMHANS. "There's no mystery; we must encourage people to be rational in their response, rather than panic."

While NIMHANS has set up a helpline to reach out to patients, States like Kerala have set up helplines to tele-counsel people in quarantine.



• GETTY IMAGES/ISTOCK

The calls have been increasing: last Saturday, for instance, 7,000 calls were made, and the government has employed an army of over 700 counsellors. "People in quarantine grapple first with stigma, then anxiety about getting infected; then of course with the stress of loneliness," says Kiran P. S., State nodal officer for the Mental Health Programme that runs the helpline.

Engaging socially

"What is important is to understand the difference between physical distancing and social distancing," says Dr. Jain. "Distancing should not be interpreted as social or emotional disengagement. Fostering a sense of social togetherness – whether on the phone, or through acts of altruism by helping people in the neighbourhood – is essential at this time."

One doesn't have to be ill to suffer during these stressful times. In Jaipur, Rubina Shah, a homemaker, is physically and mentally drowning. With her children and husband at home all day, her chores have increased manifold. "My children are five and eight; keeping them busy all day while keeping the house in order is exhausting," she says. Shah's husband, a PR executive, works from home and does help, but the bulk of it falls on Rubina. "I barely get any break," she says. "It's making me irritable."

One of her blessings has been that her parents are within reach and she talks often to them. Others don't have this luxury. Yet, as Bombay-based mental health expert Prakriti Poddar says, staying con-

nected even via digital platforms becomes vital at such times. The Ahmeds are not comfortable with video calls or chats, but their son Rohan calls them three-four times a day from Bengaluru, asking if they've eaten, suggesting exercises for his diabetic mother, and movies on TV for the evenings. "They are praying more; it's their way of seeking solace," says Rohan, "But I worry. What if something goes wrong and I cannot reach them on time?"

Staying close to family, however, doesn't mean the same for everyone. For people with dysfunctional family dynamics, such as an abusive partner or domineering parents, staying at home is a trigger for anxiety. "It has left many susceptible to relapse of clinical depression," Kolkata-based psychologist Charvi Jain says.

In such times of uncertainty, the only way forward is to accept that while we don't have control over everything, there are some things we can do. Avoiding information overload from social media, avoiding speculation about the pandemic, keeping busy with activities, playing games, engaging with books, music, dance and movies – all this helps. Now is the time for those cat videos. WHO recommends focusing on positive news, like news of people recovering from the virus, to get hope. "We can take this as an opportunity," says Dr. Poddar. "The earth is recuperating, and so can we."

(With inputs from Divya Gandhi & Shyama Rajagopal.)

The writer is a Jodhpur-based freelance journalist.

GREEN HUMOUR BY ROHAN CHAKRAVARTY

LEARN PHYSICAL ISOLATION AND SOLITUDE FROM THE MASTERS

24 HOURS A DAY AREN'T ENOUGH FOR ME TO ENJOY MY OWN COMPANY.



-The Eurasian Lyx

I RESTRICT COMPANY TO PEOPLE WHO LIKE MY STENCH, i.e. ME.



-The Striped Skunk

TOO MUCH OF A PRICK FOR ANYONE TO HANG OUT WITH.



-The Indian Crested Porcupine

TOO INTIMIDATING A REPUTATION FOR ANY MAN TO SWIPE RIGHT.



-The Black Widow Spider

RELATIONSHIP STATUS: UNDERGROUNDS UNTIL MONSOON.



-The Indian Purple Frog

NETFLIX & CHILL: PARthenogenesis



-The Brahminy Blind Snake

PASSING BITE

When history rhymes

The sequence of disasters that hit Bengal in the 1940s offers a warning for the present day



Disaster compounded
A painting on the Bengal Famine by Gobardhan Ash. • SPECIAL ARRANGEMENT

It is rather interesting at this moment in time to look at a period in our history from about 70 to 80 years ago, specifically in the region of Bengal, in undivided India. At the beginning of World War II in September 1939, India was deep in the struggle for independence. The capital of the Raj had shifted to Delhi but Calcutta was a thriving metropolis of just under three million people, and commercially, culturally and politically one of India's two major urban centres. Around Calcutta spread Bengal, with its huge riverine maze feeding one of the most fertile regions of the world. Despite the city's commercial robustness and the region's legendary fecundity, there was

urban poverty and large sections of Bengal's peasantry were struggling under iniquitous conditions created by the zamindari system and the complicit British Raj that arched over that system.

The war that devastated so much of the northern hemisphere never quite reached Calcutta in its typical form: there was no fighting around the city or anywhere in Bengal – the nearest battles took place on the Burmese border, 750 kilometres away. The air bombing that devastated other places hardly touched Bengal – Japanese planes sporadically bombed Calcutta between December 1942 and January 1943, but these caused only token damage. Yet, by 1948, within

nine years of the war starting, Calcutta was mutilated forever in a way that London, Paris, Rome and Moscow were not. And the province of Bengal was scarred in a manner that was comparable to some of the worst devastations in central and eastern Europe and in south-eastern Asia.

Refugee wave

The first event that hit Calcutta, in the summer of 1942, was the wave of Indian refugees who trekked all the way from a Burma being rapidly captured by the Japanese: migrant labourers, clerks, plantation managers, all trying to make their way home by foot on a horrendously difficult route.

The second event was something that spread over all of India: the protests and upheavals that followed Gandhi's call for Quit India in early August. When Gandhi and the Congress leaders were arrested, the protests, the violent police reactions to it, and the retaliatory arson and riots continued from August almost into October.

Then, in October, the coast of undivided Bengal and Orissa was battered by a huge cyclone that killed many thousands of people, destroyed most of the cattle and devastated crops. Beneath this, away from urban public awareness, something else had begun: the government through its agents had bought up huge quantities of rice from Bengali peasants for the war effort; such was the price being offered that farmers had sold even their personal yearly stash, imagining that the next harvest would yield enough to make up any shortfall. In the meantime, seeing how the Japanese army had used local boats and bicycles in the Malayan peninsula, a

Yet, by 1948, within nine years of the war starting, Calcutta was transformed for the worse, mutilated forever in a way that London, Paris, Rome and Moscow were not

panicked administration confiscated most of the boats on Bengal's rivers – boats that were a lifeline for the villagers. All of this conjoined to create the Great Bengal Famine.

The peak of the famine was between 1943 and 1944, but the aftershocks in the shape of cholera and typhoid that claimed the weakened survivors continued into 1945 and beyond. The toll was close to three million dead. And in mid-1946 came the massive communal killings of Calcutta that presaged the violence of Partition in both Bengal and Punjab.

Domino effect

By 1948 the city was filled with a third wave of refugees – Hindus from the newly formed East Pakistan. From a bad mixture of cruel administrative edicts and natural disasters, the population of Calcutta had more than doubled and for the next several decades it would become a city associated with poverty and deprivation. The two Bengals would have intersecting but distinct histories that would lead to the second great cleavage in 1971, which would result in hundreds of thousands of deaths in genocide by the Pakistan Army, and lead to the formation of Bangladesh.

What this sequence teaches us is that different kinds of disasters often feed on each other, topple into each other like dominoes. Right now some of us may have forgotten the massive bomb of demonetisation; the criminal clampdown in Kashmir, the deliberate attacks on university students and the fascist CAA-NRC 'laws' and the huge protests against those may have receded from our minds; the reckless crony capitalism for which this regime wilfully destroys environmental safeguards may not even be on our radar; nor might the official skulduggery going on within the banking sector; but all these are feeding into what is happening now with the COVID-19 pandemic and will become 'force multipliers' that will continue to wreak havoc on our lives and our Republic.

Just as the armed conflict never touched Bengal, the actual pandemic by itself may – repeat may – only have a limited effect on our country, but coming as it does, right after this long sequence of calamities constructed by a cruel and uncaring regime, it may be the last heavy straw that will break many backs.

Ruchir Joshi is a filmmaker and columnist.



Notes from a terrace

Aatish Nath

In the past two weeks, the world has shrunk exponentially. We may know the goings on in New York and London, Hong Kong and Singapore, but travel to any of these places is a distant dream. Closer home, even a walk to the neighbourhood bar or meeting friends is out of the question.

But in this climate of uncertainty, the natural world will not be reined in. On the terrace outside my fifth-floor apartment, a peepal tree is kept at bay by flimsy netting but the ecosystem it supports gives me a sense of hope, calm and a reminder that life does go on. The lockdown has helped me see something that has literally been right in front of me all along.

Tree of life

Morning to night, the tree has visitors: birds and bats come every day to pick at the lime-sized fruits that signal that Mumbai's seasonal drop in temperature is behind us, and we have only humidity, heat and now, social distancing, to look forward to.

As I sit at the table on the terrace, pretending to work but in fact reading more about the coronavirus, the music I am playing is interrupted by the chirps and calls of sparrows, coppersmith barbets, red-vented bulbuls, rose-ringed parakeets, common mynas, koels, crows and kites.



Skittish The coppersmith barbet. • AATISH NATH

Each has its own distinct personality: coppersmith barbets, for instance, are skittish when I get too close to take a photograph; but the crows just fix you with a stare, part imperious and part mischievous, daring you to come closer.

This natural community reminds me that although we struggle to create a semblance of order under lockdown, the rhythms of nature are unchanged by it all.

And now, with humanity trapped in a holding pattern, the symbiotic relationship between tree and bird is a source of joy and hope. Yes, we

have television and books and laptops but experiencing life through a screen is mediated and can sometimes feel even more isolating.

Instead, it's the snippets of life I see on the peepal tree that ease my days indoors. I track the coppersmith barbet and I am dazzled by its colour – crimson and yellow and grass green – and its movements unencumbered and free.

Watching it peck on a fruit almost as big as its head is a vibrant interlude to the monotony. It's a dash of colour that finds its way through the branches whose leaves dance in the

breeze and glisten as they catch the light in an array of yellows and greens.

It's only when the bats fly in at night to feast and roost upside down on the branches that I am reminded of why we're trapped indoors in the first place. Then my attention moves back to my many screens, to the news from faraway places, and to the other people who are also finding solace in the little things.

The Mumbai-based food and travel writer is rediscovering the world around him as he works from home.

With humanity trapped in a holding pattern, the symbiotic relationship between tree and bird is a source of joy and hope

Google the birds and find their iucn status and endemic status.

NORTH
♠ 8
♣ J 7 3
♦ K 10 5
♥ K Q 10 8 5 3

WEST
♠ K 6 5 3 2
♦ 10 8
♥ A 8 7 6
♣ 9 4

EAST
♠ 4
♦ K 6
♥ Q J 4 3 2
♣ A J 7 6 2

SOUTH
♠ A Q J 10 9 7
♥ A Q 9 5 4 2
♦ 9
♣ Void

North-South vulnerable, West deals

Bob Jones



The bidding:
WEST NORTH EAST SOUTH
2♠ Pass 2NT** 4♣
All pass
**Weak, 5 spades plus a 4/5 card minor
***Asks for the minor
Opening lead: Nine of ♠

Today's deal was played recently in China. South was a Chinese expert known by his nickname – Gunga. As we've said before, the popularity of Multi Two Dia-

monds, where all weak two-bids are opened with a bid of two diamonds, has the world looking for other possible uses for opening bids of two hearts and two spades. The result on this deal is not likely to garner

support for this particular use.

Gunga gave up on spades, knowing that West had five of them, and made the practical bid of four hearts. He played the queen from dummy on the opening club lead

and ruffed East's ace. Knowing that West held five spades, almost certainly headed by the king, Gunga made a spectacular deceptive play – he led the seven of spades from his hand! Poor West had no idea what was happening and innocently played low. West was crestfallen when dummy's eight held the trick.

Gunga discarded his diamond on the king of clubs and led a heart to his queen. When that held, he cashed the ace of hearts. This drew all of the enemy trumps and there was still one trump left in dummy. Gunga used it to take a ruffing finesse against West's king of spades and ended up taking all 13 tricks! Nicely done!

QUIZ

Easy like Sunday morning

A record of marvelous medical history!

Berty Ashley

Born on April 5, 1827, Joseph was an English surgeon who was a pioneer in antiseptic surgery. After studying Louis Pasteur's work in microbiology he promoted the use of carbolic acid (now known as phenol) as an antiseptic. He found that after spraying instruments it reduced incidences of gangrene and he instructed surgeons to wash their hands with 5% carbolic acid solutions. He became known as the 'Father of modern surgery'. In 1879, an antiseptic (which we now know as a mouthwash) was named after him. What is this antiseptic and what was his full name?



Early 1950s The virus responsible for conjunctivitis was discovered in Chennai. • GETTY IMAGES

part of the eye and the inner surface of the eyelid caused by infectious microbes. In the early 1950s the adenovirus responsible for it was supposed to have been discovered at the Government Ophthalmic Hospital in Egmore, Chennai, which is the second oldest ophthalmic hospital in the world. This led to this disease getting a particular term. What is the common name for conjunctivitis?

5 People used to believe that mental health was affected by the phases of the moon but various studies have disproved this. But it was so prevalent that one of the words we use to describe insanity is derived from the Latin word for moon. What is this term that you've probably used to describe someone as being mad?

3 This individual was one of the first to argue that all illnesses had natural causes, rather than blaming supernatural occurrences. He advocated patient-centred medicine and that healers should be clinicians, making close observations and using rational thinking processes. He also emphasised the moral and ethical dimensions of medical care. Who was this pioneering healer?

4 Conjunctivitis is inflammation of the outermost layer of the white

6 This disease has been plaguing mankind for thousands of years.

Egyptians first recorded its symptoms on papyrus more than 3000 years back. The very first clinical test for this disease was in India where ants were used for confirming diagnosis. Even during the later centuries European doctors used to taste the urine of patients to confirm this disease. What problem is this which is one of the fastest growing diseases, thanks to more people living sedentary lifestyles?

7 Ernst Moro was an Austrian paediatrician who discovered that breast-fed children had stronger bactericidal activity in their blood than bottle-fed ones. His biggest contribution was carrot soup. Known as Moro's carrot soup, he peeled and pureed carrots in water, added salt and served it. This simple dish exponentially decreased the death of babies old a then deadly (now simple) issue. What is it?

8 Many cultures and civilisations have known for thousands of years about the properties of salicylates, for example the medicinal property of white willow, which contains derivatives of this substance. However, it was only in the 1800s that this chemical was first isolated in a lab and much later the form in which we know it today was patented. What is the generic name of this painkiller?

9 In 5,000 years of medical history only two diseases have been completely eradicated, both caused by viruses. First was Rinderpest, an infectious viral disease of cattle. The other was caused by one of two virus variants, *Variola major* and *Variola minor*. The earliest mention of this disease was in the 3rd century BC in Egyptian mummies and the last confirmed case was in 1977. What disease was this that was finally certified as eradicated by WHO in 1980?

10 Melatonin is a hormone released by the pineal gland that regulates sleep and wakefulness in the body. It has been proved that light from a popular artificial device hampers the production of melatonin and thereby interferes with the sleep cycle. Unfortunately nowadays people seem to spend more time on this. What device is this?

A molecular biologist from Madurai, our quizmaster enjoys trivia and music, and is working on a rock ballad called 'Coffee is a Drink, Kaapi is an Emotion'. @bertyashley

LETTER FROM A CONCERNED READER

Beating around bush

Respected Madam/Sir,

First of all whether everybody is ok in the office or no? Please convey all the sentiments from Mathrubootham family to all colleagues and family members.

Madam/Sir, what and all is happening in the world these days? Total confusion. Total panic.

But you will say Mr. Mathrubootham why you are worried about world and all? You just sit and worry about India no? Whether any panic and confusion is there?

Madam/Sir, what you are talking like fools. Prime Minister is even opening mouth means peace of mind is gone. First time he made one speech and people are beating pressure cooker and frying pan. Next time he made one more speech and police are beating people with frying pan. Next one more speech means what is beating what? People will beat police? Frying pan will beat people? Iddi thattu will beat dosa kallu? Why when PM making speech immediately something is beating something? Any explanation?

Meanwhile, it is non-stop tension in house. Mrs. M is talking as if we will never leave house for next 35 years. Yesterday I said Kamalam, let's have vegetable biryani for lunch? She looked at me in slow motion like Ramya Krishnan looking at Rajini in *Padayappa*. She said, if we will eat all vegetables today means what to eat tomorrow? Tomorrow don't come crying, ok? I will tell you to go and stand in balcony and do photosynthesis.

So I said, ok Kamalam, what we shall make then? She said please go into storeroom and look for all worst and horrible and expiry items. We will eat all that first. I looked at Kamalam in slow motion like Rajini looking at bull

previously in *Padayappa*.

Madam/Sir, like that-like that, I spent two hours in store room making one mountain of useless food items. One packet of *kollu* from Jambuvan era. Two-three packet masala powder with expiry date from 1985. One pickle bottle that is falling behind gas cylinder. It is Caico Tender Mango pickle that is doing expiry before Indira Gandhi is doing expiry. I filled one plastic bucket full and carried into the kitchen.

I said Kamalam, two hours I have collected every single useless item from the store. Can you believe it or not? Did you know that we are having 23 different types of sambar powder in this house from 1955 to 2013? But what is Kamalam doing? Kamalam is sitting on iPad and reading and reading like anything. I said Kamalam, what is it? Some new novel?

She said old man one website is there. It is giving nonstop breaking news of coronavirus from all over the world. Oh my god, seven new cases in Bosnia! Oh no!

Total lockdown in Slovenia! Old man, come! You also sit and read with me.

I said Kamalam, this is virus or cricket match? You please sit and do time-wasting. I am going to take all these expired items and make amazing foodstuffs.

For two-three hours I am cooking and cooking like anything. One recipe for *kollu* rasam is there in YouTube. So I made it carefully with all expired stuff. I said Kamalam, please you enjoy this wonderful dish. This is called cooking during time of coronavirus. Whether you are impressed or not?

We both had two-three spoons of *kollu* rasam. Then Kamalam got up and went into kitchen.

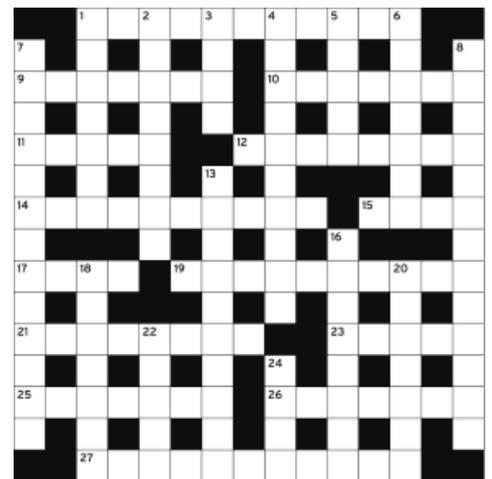
What happened after that? Madam/Sir, moral of the story is simple. Without Prime Minister speaking also, people like Kamalam are beating other people. Such as myself.

Yours in self-isolation,
J. Mathrubootham



GETTY IMAGES/ISTOCK

THE SUNDAY CROSSWORD NO. 3094



Across

- Pieces of legacy media: limp nerd finally is getting thousands (6,5)
- Berlitz finally ignored fussy sforzato, in a way (2,14)
- Box with Her Majesty somewhere on the River Dee (7)
- Depreciate how Cockney cavalryman travelled (5)
- Pacify mad down on the rampage (4,4)
- That satire will be undisciplined if things continue as they are (2,4,4)
- Last 40% of 'mercy killings': most of world's population (4)
- Some impeached a persistently dull pain (4)
- 'Cat' anagram (anag.) is 'act'? (5,5)
- Named pup negligently, not yet investigated (8)
- Cheat with a set of playing cards (5)
- Singer's floral ornament (7)
- President that's kind of green (7)
- Word-botching and the like? (11)

Down

- Florida salesman using every effort (4,3)
- Old, almost stately Italian love song (14,3)
- Perhaps artisanal terrine eaten for starters? (4)
- Boots out Democrats: Biden's finally implicated (3,7)

- Hot air from 19th choice of squad? (5)
- Spaced, Ideal, Taxi, Catastrophe, Outnumbered, Miranda and Seinfeld primarily? (7)
- See a guard's job brought about level-headedly (5,2,1,5)
- Under a dark sun, crazily strong cannabis gets you stoned (5,2,1,5)
- Old cove coming before academic for mighty battle (10)
- Everyman sent cog spinning in barroom device (3,5)
- Some member like 6, they say (7)
- 20 Crippling game in old America (7)
- 22 Greek troops not willing to participate (5)
- 24 Baseless, lurid... containing this? (4)

Solution No. 3093



ANSWERS
1. Listerine, Joseph Lister
2. Fats
3. Hippocrates, after whom the Hippocratic oath is named
4. Madras Eye
5. Lunar
6. Diabete
7. Dantes
8. Aspirin
9. Smallpox
10. Mobile phones

Anusua Mukherjee

I had been fretting over the prospect of interviewing Madhur Jaffrey at the Jaipur Literature Festival (JLF) from even before I boarded the flight early this year. The reason is shameful: my knowledge of cooking begins and ends with boiling Maggi noodles.

What could I possibly ask the cookery legend who single-handedly changed the way the West thinks about Indian cuisine with her BBC show and cookbooks? But I had a fallback ready: *Shakespeare Wallah*, that deliciously decadent 1965 Merchant-Ivory film about a British theatrical company in post-Independence India for which Jaffrey won the Silver Bear for Best Actress at the Berlin International Film Festival that year. I couldn't wait to hear what she had to say about working with James Ivory, Ismail Merchant, Ruth Praver Jhabvala, and, above all, Satyajit Ray, who had composed the film's music.

When I see the petite lady walking towards me in the authors' lounge at Diggi Palace hotel, I have a *déjà vu* moment: this is Manjula from *Shakespeare Wallah* – the same dangerous eyes, the same wicked half-smile – only, this time, she is dressed in an everyday salwar-kameez rather than the chic attire of the Bollywood diva she played in the film. And she declares cattily, if a bit wearily, that she will keep the interview short with “*chhota chhota*” replies, deflating my enthusiasm.

A performance

The first question I ask is how she would like to define herself – as an actor, a writer, or cookery expert. Pat comes the reply: “I am an actress who acts the part of a cook.” So is there a distance between her ‘real’ self and her cooking persona? “There’s no distance as such but I am also watching myself. And it’s a kind of performance because I am really an actress.” And what about her writerly self (Jaffrey is the author not only of some 30 cookbooks but also of the delightful memoir, *Climbing the Mango Trees*, about growing up in a sprawling, affluent Delhi family, surrounded by sumptuous food in the final years of the Raj, and *Robi Dobi: The Marvellous Adventures of an Indian Elephant*, a children’s book, among others)? “Even while writing, I am trying to be as honest as I can, which is also something an actress does. Be honest and clean and clear, instinctive, intelligent – all the qualities you want in an actress, I bring to my writing too, I hope,” she says.

Earlier that day, I had attended Jaffrey’s session, ‘Climbing the Mango Trees: Food and Memory’, with author Chandrabas Choudhury, where she had talked about how she first started cooking – out of necessity rather than passion. Once she had

I am an actress who plays the part of a cook

60 MINUTES WITH
MADHUR JAFFREY

The cookery legend who almost single-handedly popularised Indian cuisine in the West talks about how she taught herself cooking from her mother’s notes and how she was shoehorned into *Shakespeare Wallah*



ILLUSTRATION: R. RAJESH

left the comfort of her home for London, to join the Royal Academy of Dramatic Art in 1955, everything changed. “There is this pea-green smog that comes in at 3 o’clock and you see nothing. This was just after the War, and the food was simply awful. I was dreaming of *hing jeere ki alu* or *bhara hua karela* while having some watery cabbage mess or transparent roast beef at the canteen.” Out of desperation, she started writing letters to her mother, asking for recipes. Jaffrey tells me later: “I wasn’t taught cooking. I am self-taught through my mother’s handwritten recipes. But I must have had a good palate, although I didn’t know the word ‘palate’ at the time. I could instinctively translate a three-line recipe into a dish and through trial and error I got it right.”

Food memories

From 1973, when Jaffrey wrote her first cookbook, *An Invitation to Indian Cooking*, a lot of preconceptions about Indian food in the West have changed, so much so that chicken tikka masala is now arguably the national dish of Britain. What is Jaffrey’s take on this? “Some people have learnt nothing, but there are many others who have read my books and their attitude to Indian food is a little different now. When I cooked on TV in England, attitudes started changing. England is filled with people with Indian blood who are hardly aware of it but I think some memory, some historical connection, stays. The show just brought back memories for them. America doesn’t have this connection. The British never liked Indians but they liked Indian food.” She adds, “I have three generations of Westerners and Indians who learnt to cook from my books and taught their children, and now those children are cooking for their children from my books. It’s very gratifying.”

Does she relate to the term, ‘foodie’, as it is used now, involving, for the most part, Instagram posts on the food one is having in fancy restaurants? Jaffrey scoffs, “That I think is being obsessed with taking pictures of food and showing off. The younger generation is very much into that little gadget you have there [pointing at my phone] and into sending around what they are doing to all their friends – it’s a new attitude that I don’t have. I don’t want to tell the world what I am eating, I just want to enjoy it.”

While we are on changing worlds, I pop the question about her *Shakespeare Wallah* days. Her eyes light up. She says, “I was very young, I introduced James [Ivory] and Is-

mail [Merchant] to each other in England, we were all friends. The initial plan was that my ex-husband, Saeed Jaffrey, and I would go back to India and start a touring theatrical company there. Jim said that was a wonderful idea for a film and we would sit and discuss it in his apartment. Then he went to India and met the Kendals, whom he wanted in his film. But what would happen to me? So Jhabvala [the story and screenplay writer] created the character of Manjula so that I could be in it as well. That’s the story. When Saeed and I were divorced, they were very angry with him, so they kicked him out.”

Like a serpent

Did she see the Silver Bear coming for her performance in *Shakespeare Wallah*? “No, not at all. When the award was announced, everybody was shocked since they expected Felicity Kendal to win and not me. I said, what can I do? Jim said, go apologise to Felicity. I felt great but also felt bad...” she says, smiling mischievously.

Then I get to the question I was itching to ask: how was Ray? “I interacted with him later in funny ways, but not during *Shakespeare Wallah*. Jim conceptualised me as a serpent in the film and, if you notice, Manjula’s entry is always accompanied by a serpent-like music – that’s what Ray did for my character, that much I know. Much later, when *Shakespeare*

Wallah was getting an award from the President in Delhi, I was there with my father, who was telling his friends disparagingly, ‘*Iski toh hobby hain* (acting is her hobby),’ as was his wont. My supposed escort turned out to be Marlon Brando, who was my hero! Brando and Ray sat on either side of me, talking to each other across me. I tried to speak but whatever I tried to say was wrong. So I told myself, *chup baithi raho*, *inko baatein karne do* (sit quietly, let them talk). I didn’t have much to say, I was so scared of them.”

After such a long reply, Jaffrey looks visibly exhausted and I try to wrap it up. “Do you still cook at home,” I ask her. “Yes. Though I would rather somebody else did it now that I am 86. But they won’t make it as well as I do.” She leaves me with an admonishment when I confess my cooking prowess: “*Kyun nehi sikhti ho? Ghar mein koi sikhane-wala nahi hain* or you don’t want to learn? (Why don’t you learn? Don’t you have anybody to teach you at home?) You have to learn to cook some basic things, even if it is one sabzi, chawal or roti – something simple that you can enjoy. Somebody teach her.”

■ Her family was actively involved in the freedom struggle. At 10, she would spin spools of thread on the charkha

■ In 2004, she was named an honorary Commander of the Order of the British Empire for her services to cultural relations between India, the U.K., and the U.S.

■ Her latest celluloid outing is as a badass grandma in a music video for the New York-based rapper Mr. Cardamom

■ Her latest book, published last year, is of recipes tailored for the Instant Pot



Busy at work Scene from a Goan kitchen. • GETTY IMAGES

NOSH TALGIA

The savoury-sweet rice cake from the Malabar coast evokes many fond memories during this season of Lent

Sanna, idli’s festive cousin

Raul Dias

One of the greatest joys of childhood is that intoxicating cocktail of hope and anticipation. In these days of social distancing and Sunday masses that stream online, I can’t help but won-

der: will all be well before Easter Sunday? Will our dining tables groan under the weight of Easter goodies? The answer may be a resounding No. But what’s the harm in a bit of vicarious feasting to get our mind off the gloom?

Growing up in a devoutly Catholic household, hope and anticipa-

tion of the edible kind ruled us kids right through Lent, beginning with ‘Fat Tuesday’ when we gorged ourselves silly on white crêpe-like pancakes, their portly bellies stuffed with a lurid pink sweet coconut filling. Little did we know then that the white pancake signified the body of Christ and the pink stuffing,

his blood. But morbidity aside, it was the dish we anticipated the most.

Another Lenten delicacy that sat higgledy-piggledy atop each other on our dining table was the sweet-savoury steamed rice cake called sanna. Mum was not very well-versed in the art of making sannas, so we would always (and still) rely on the skills of Rosy Auntie for what was practically our quotidian Lenten supply.

The ‘Idli-wali Auntie’, as she was called by her clueless Maharashtrian neighbours for whom an idli and a sanna were ‘same-same’, octogenarian Rosy Britto has been making sannas for as long as she can remember.

Her bifocal glasses are perpetually fogged up by the plume of steam from her faithful copper sanna steamer called *chondro* in Goa and *tondor* in Mangaluru.

Same, but different

Often mistaken for an idli, a sanna is a Goan-Mangalorean festive delicacy made from a fermented mix of fat-grained par-boiled rice, coconut, sugar, salt and that all-important leavening agent, the sap of coconut palm colloquially known as ‘toddy’ or *sur* in Konkani.

Toddy is one of the main differences between sanna and idli. In idli, urad dal (black gram) is used for fermentation.

Forsaking an idli steamer for a funnel-topped *chondro* steamer, sanna is always spooned into small, steel *vatis* (bowls), also called *gindlaan* in Mangaluru, which give it its round, cake-like shape unlike idli’s convex contours.

Texturally, a sanna is spongier, with a glossy white finish unlike the more crumbly idli – although often the red Goan parboiled rice renders a few tiny red flecks onto a sanna’s surface. Its accompaniments

too are very different from those of an idli: no chutneys or sambar here.

With or without?

I always like to eat sanna by itself. But I must admit to several rather unsuccessful pairing attempts over the years – with everything from Nutella to BBQ sauce.

As a child, I once even convinced our cook to deep-fry a few bits of stale sanna with disastrous results.

But for the most part, the duo of sanna ani dukramaas (pork meat) is considered the ultimate way to relish the rice cake. A rich, fiery red pork stew called *sorpotel* is the de facto plate fellow in Goa, and in Mangaluru the preferred accompaniment is a robustly spiced pork *batat*, with the curry’s spiciness often tempered with a little *roce* (thin coconut milk).

For sweet lovers like me, there is a dedicated sweet iteration of the sanna called *godachi sanna*, made with jaggery and best enjoyed at tea time.

Interestingly, just like the steamed rice and milk dish called *kiri-bhat* in Sri Lanka and Kerala’s bamboo-steamed coconut and rice cake *puttu*, sannas crushed with a little milk, sugar and ghee are often fed to infants as their first solid meal.

As I finish this piece, a little ray of hope beams down to me in the form of a reply to a panic-tinged text message I had sent someone important a few hours ago. “Yes, you’ll get your dozen sannas this year, too!” Rosy Auntie reassures me, as I smile to myself in relief, hope and anticipation of that one constant even in the year of the pandemic.

The Mumbai-based writer and restaurant reviewer is passionate about food, travel and luxury, not necessarily in that order.

SUNDAY RECIPE

Sanna

INGREDIENTS

1 cup parboiled Goan red rice (*ukda sandulu*)
1/2 cup fresh coconut (scraped)
1.5 cups coconut toddy
4 tsp granulated sugar
1 tsp salt

METHOD

- Soak the rice in water overnight. The next day, after draining the rice, grind it along with half a cup of toddy for a few seconds. Add another half cup of toddy along with sugar and salt and grind till the mixture resembles a coarse slurry.
- Now add in the grated coconut and the remaining half cup of toddy. Grind for a few seconds more. Adjust sugar and salt, if needed.
- Transfer to a non-metallic container and cover with a damp muslin cloth. Allow to stand in a cool, dark place for a few hours till the batter doubles up in volume.
- Spoon the batter into 12-14 lightly oiled small steel *vatis*, making sure not to fill to the top as the batter will rise again while steaming. Place the *vatis* in a steamer. Cover and steam for around 20 minutes or until a skewer poked in the centre of the *vati* comes out clean.
- Unmould the sannas immediately and place them in a serving dish lined with a damp muslin cloth or oiled banana leaves. Serve sannas piping hot, either on their own or with curry.

