01 April 2020: PIB Summary & Analysis

1. Price Monitoring & Resource Unit (PMRU)

Context:

J&K sets up PMRU of NPPA.

Details:

- Jammu & Kashmir Union Territory has become 12th State/UT where the Price Monitoring & Resource Unit (PMRU) has been set up by the National Pharmaceutical Pricing Authority (NPPA).
- PMRUs have already been set up by the NPPA in 11 States, including Kerala, Odisha, Gujarat, Rajasthan, Punjab, Haryana, Nagaland, Tripura, Uttar Pradesh, Andhra Pradesh and Mizoram.

About PMRU:

- The PMRU, a registered society, shall function under the direct control and supervision of the State Drug Controller of Jammu & Kashmir.
- The unit shall be funded by the NPPA for its recurring and non-recurring expenses.
- The PMRU shall help the NPPA and the State Drug Controller in ensuring the availability and accessibility of medicines at affordable prices.
- It is also expected to organise seminars, training programs and other information, education and communication (IEC) activities in the areas of availability and affordability of medicines for all.
- The PMRU will also collect samples of medicines, collect and analyse data and make reports with respect to availability and over-pricing of medicines for taking action under the provisions of the Drug Price Control Order (DPCO).
- **PMRU Mandate:** To track violation of prices of essential drugs and medical devices under the Drugs Price Control Order (DPCO).
- **PMRU Functions:** Offering technical help to the State Drug Controllers and the NPPA to –
    - Monitor notified prices of medicines,
    - Detect violation of the provisions of the DPCO,
    - Look at price compliance, collect test samples of medicines, and
    - Collect and compile market-based data of scheduled as well as non-scheduled formulations.
- The PMRU is chaired by the State Health Secretary. The Member-Secretary would be Drugs Controller.

About NPPA:

To know more about the National Pharmaceutical Pricing Authority (NPPA), please check PIB dated 17th March, 2020.

2. India Post Payments Bank

Context:

During the lockdown period till March end, 6.5 lakh transactions were effected through the IPPB (India Post Payments Bank).

To know all about India Post Payments Bank, click on the linked article.

3. Food Corporation of India (FCI)

Context:

FCI ramps up food grain supplies across the country during the lockdown due to COVID-19 outbreak.

About the FCI:

- Food Corporation of India (FCI) is a Public Sector Undertaking, under the Department of Food & Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution, GOI.
- It is a statutory body set up in 1965 under the Food Corporations Act, 1964. It was established against the backdrop of major grains shortage, especially of wheat.
- **FCI Objectives:**
  - To provide farmers remunerative prices
  - To make food grains available at reasonable prices, particularly to vulnerable sections of society
  - To maintain buffer stocks for food security
  - To intervene in market for price stabilization

Click on the links in the below table to read more related articles:

Public Distribution System (PDS)	National Food Security Act (NFSA)

4. About COVID-19

Context:

What do we know and what do we need to know about Novel Coronavirus.

Details:

Infection

- The virus infects the epithelial cells in the throat and lungs.
- SARS-CoV-2 binds to the ACE2 receptors on human cells, which are often found mostly in throats and lungs.
- Virus on the skin, lacking ACE2 expression, will be harmless.
- The virus enters through the body through the nasal passage, eyes and mouth.
- Our hands are the main instruments that take the virus to reach our mouth, nose and eyes.
- Washing hands with soap water for 20 seconds as often as possible helps prevent the infection.

Infectious dosage

- A dose of 700000 PFU was needed to infect a Macaque.
  - PFU (Plaque forming unit) is a unit of measurement of sample infectivity.

- Although the animal did not show any clinical symptoms, the droplets from the nose and the saliva had a viral load.
- Humans will need a higher dosage than 700000 PFU to get infected.
- An animal study on genetically modified mice with ACE2 receptors showed that it could be infected with SARS with just 240 PFU. In comparison, it required 70,000 PFU of novel coronavirus to get infected.

Infectious period

- Length of time an individual can transmit the infection to others is not known precisely, but possibly up to 10-14 days.
- Artificially reducing the contagious period is a crucial method of reducing overall transmission.
- Hospitalisation, isolation, lockdown and quarantine are all effective methods.

Who can infect?

- Anyone infected with the virus can infect others even before the symptoms appear.
- Most carriers do not even show signs.
- Covering our mouth and nose when we cough or sneeze will help reduce the infection.
- The virus is present in the saliva, sputum and faeces of the infected person for the whole infectious period.

How we infect?

- Transmission is mostly via droplets.
    - This requires relatively close contact, less than 6 feet.
    - This is why it is recommended that we stay 1.5 metres away from each other in public places.
- Inanimate vector of disease, in particular phones, doorknobs, surfaces are a potential source for transmission, but not much is known about it.
- It is prudent to sanitise out hands after touching doorknobs, lift call buttons and counters in public places.

How many we infect?

- The average number of new infections caused by a typical infectious person, that is human transmissibility range (R0) is between 2.2 to 3.1.
    - In simple words, one infected individual on the average infects about 2.2 to 3.1 persons.
- By physical distancing, we can artificially reduce the actual transmissibility, thus slowing the rate of infection.

Where did the virus come from?

- It is not from eating bat soup. Once you boil, the virus is decimated.
- Initially, it was speculated that the SARS-CoV-2 virus jumped from bat to humans. But recent genomes study show first it must have leapt from bat to an intermediary species before it latched on to humans.
- Another study indicates that a lineage of SARS-CoV-2 virus was circulating in humans before the disease outbreak.

How it evolved?

- SARS-CoV-2 has emerged either by:
    - Natural selection of virulent strain in a non-human animal host before zoonotic transfer to humans, or

  - Natural selection of virulent strain in humans following a zoonotic transmission.
- Only more studies will show which of the two is right.
- Scientists are still not clear what are the mutations in SARS-CoV-2 that allowed human infection and transmission.

When did SARS-CoV2 emerge?

- While there have been no documented cases of SARS-CoV2 before December 2019, preliminary genomic analyses suggest that the first human cases of SARS-CoV-2 appeared between mid-October and mid-December 2019.
- This means there was a period of unrecognised transmission in humans between the primary zoonotic event and the outbreak.

Can it infect animals?

- The molecular modelling suggests that SARS-CoV-2 can affect besides human, bat, civet, monkey and swine cells.
- It does not infect domestic animals or livestock. Consuming eggs or poultry will not result in SARS-CoV-2 infection.

Can one be infected twice?

- Experimentally infected macaques were not capable of being re-infected.
- Likewise, there is no evidence of reinfection with SARS-CoV-2 after recovery in humans.
- However, how long the immunity will last is unknown.

How severe is the illness?

- The majority of COVID-19 cases are mild (81%), about 15% need hospitalisation and 5% require critical care.
- That is, the vast majority of the infected will not even need hospitalisation.

Who are the most vulnerable?

- Healthcare workers
- People above 60 years of age
- People with prior cardiovascular disease, hypertension, diabetes, and respiratory conditions

What is the cause of death?

- Most of the deaths are caused by respiratory failure or respiratory failure combined with heart damage.
- Leakage of fluid into the lungs, which inhibits respiration and leads to morbidity, is the primary clinical condition.
- At present, the treatment for COVID-19 is primarily supportive care, including ventilation if necessary. Several therapeutic trials are ongoing, and the results are awaited.

Will the virus spread through air?

- In the air, the virus can survive only up to 2.7 hours. Therefore being in open spaces such as a balcony or the terrace is no harm.

Is there a less virulent strain?

- While many strains are being identified, studies so far have not indicated any mutations that are linked to any changes in transmission or disease severity.

Will the onset of summer bring any respite?

- No strong evidence exists showing a reduction in transmission with the seasonal increase in temperature and humidity.