



DATE - 18th June 2021

**A place for disruptive technology in
India's health sector (The Hindu, GS-2,
Health)**

Context:-The medical community has been selfless during this COVID-19 times in particular on one hand and this community is also losing a number of staff on the other. They only have masks and gloves as the protective gear which exposes them to great risk. So in this COVID-19 time technology can be a great game changer for both i.e. Health workers and patients.

What about the international scenario:-

- There are reports where hospitals are using robots to care for COVID-19 affected patients.
- In China 5G-powered temperature measurement devices are used at the entrance to flag patients who have fever/fever-like symptoms.
- Robots are used to measure heart rates and blood oxygen levels through smart bracelets and rings that patients wear
- Robots are also used to sanitise wards.

In India:-

- Sawai Man Singh government hospital in Jaipur held trials with a humanoid robot to deliver food and medicines to COVID-19 patients.

How technology can be used in the Health Sector:-

- Blockchain technology can help in addressing the interoperability challenge.
- Block chain will help in combining history of all medical data, including formal medical records
- Health data from mobile applications and wearable sensors will also help in contributing to Big-Data.
- Big data analytics can help improve patient-based services.
- hospital health-care facilities can be improved.
- AI and the Internet of Medical Things will shape health-care applications.
- Medical autonomous systems will help in creating supporting medical care delivery within a complex environment.
- The Medical Autonomous system will include an autonomous critical care system, autonomous intubation, autonomous cricothyrotomy and other autonomous interventional procedures which will further improve the health data and delivery of health services.
- Cloud computing will help in improving the accessibility of data to the whole health sector, especially data exchanges between doctors, departments, and even institutions and medical providers.
- Universal health coverage (UHC) which is one of the most powerful concepts in making health services accessible.

- Universal health coverage (UHC) takes help of digital technologies, led by a robust strategy integrating human, financial, organizational and technological resources.

Possible challenges:-

- Synchronization and integration, developing a template for sharing data, and reengineering of data will remain a forefront challenges
- Big data applications should help the hospitals to provide the best facilities at less cost, provide a level playing field for all sectors and players which further foster competition.
- Standardization of health data across the health sector
- Working of organization in silos such as private sector and government sector
- Data security and data privacy and ensuring the Rights are at the same time.
- High investments.

Way forward:-

- India needs to own its digital health strategy
- A Digital Health strategy (DHS) must work and lead towards universal health coverage and person-centred care.
- This DHS strategy should emphasize the ethical appropriateness of digital technologies, cross the digital divide, and ensure inclusion across the economy
- Ayushman Bharat' and other such tools such as Information and Communication Technology could be be fine-tuned with other public and private interventions

- Using local knowledge:- For example Ebola virus outbreak in Africa, where communities proactively helped curtail the spread
 - Indonesia experienced the bird flu outbreak in poultry farmers, and her community response was tremendous.

Extra Titbits:-

National Health Policy (NHP) 2017:-

- Assurance based approach:- NHP advocates a progressive incremental assurance-based approach with special focus on preventive and promotive healthcare for all strata of population.
- Health Card linked to health facilities:- NHP recommends the linking of health cards to primary care facilities for a comprehensive and defined package of services anywhere in the country.
- Patient Centric Approach– NHP recommends the setting up of a separate and empowered medical tribunal for speedy resolution to address disputes /complaints regarding standards of care, prices of services etc
- Micronutrient Deficiency:- NHP here focuses upon reducing micronutrient malnourishment and thereby providing a systematic approach to address heterogeneity in micronutrient adequacy across regions in india.
- Quality of Care:- Public hospitals and facilities would undergo periodic measurements and certification to ensure a level of quality to be maintained.
- NHP Focus on Standard Regulatory Framework to eliminate risks of inappropriate care by maintaining adequate standards of diagnosis and treatment.

- Make-in-India Initiative:- NHP is vocal about the need to incentivize local manufacturing to provide customized indigenous products for Indian population in the long run.
- Application of Digital Health:- NHP advocates extensive deployment of digital tools for improving the efficiency and outcome of the healthcare system which further aims at an integrated health information system which serves the needs of all stake-holders.
- This policy advocates about improving efficiency, transparency, and citizen experience.
- NHP provides for private sector engagement for strategic purchase for critical gap filling and for achievement of health goals.

The Key goals under National Health Policy:-

- Allocating 2/3rd or more of financial and physical resources to primary care.
- To Increase Life Expectancy at birth from 67.5 to 70 by 2025.
- To reduce Total fertility rate (TFR) to 2.1 at national and sub-national level by 2025.
- To reduce Under Five Mortality (U/5) to 23 by 2025 and Maternal mortality rate (MMR) from current levels to 100 by 2020.
- To reduce infant mortality rate (IMR) to 28 by 2019.
- To reduce neonatal mortality to 16
- To achieve global target 90:90:90 for HIV/AIDS
- To achieve and maintain elimination status of Leprosy by 2018, Kala-Azar by 2017 and Lymphatic Filariasis in endemic pockets by 2017.

Ayushman Bharat Abhiyan (A way for universal Health Coverage):-

Key features:-

- This health insurance scheme will provide free coverage of up to Rs 5 lakh per family per year at any hospital which is empaneled in this scheme, which includes both private and public all over India for secondary and tertiary medical care facilities.
- This scheme will be given to 10 crore beneficiary families and about 50 crore Indian citizens.
- This scheme takes data based on Socio-Economic Caste Census (SECC) data in the rural and the urban areas.
- There are no restrictions on the basis of family size, age or gender.
- It is like other medical insurance schemes and covers almost all diseases from day one of the Ayushman Bharat policy.
- This scheme includes benefit cover includes both pre and post hospitalization expenses.
- Premiums of insurance will be shared between Central and State Governments in a specified ratio.
- The NHPM (National Health Protection Mission) will pay for the hospitalization costs of its beneficiaries through strategic purchasing from public and private hospitals.
- The 1.5 lakh sub-centers that are converted into wellness center.
- Wellness centers will cater to the majority of services such as detection and treatment of cardiovascular diseases, screening for common cancers, mental health, care of the elderly, eye care, etc.

Analysis of Ayushman Bharat Scheme:-

- There is Inadequate human resources with requisite skill-sets to implement the scheme at the state level.
- There is lack of time and manpower to distribute the PM letters and other IEC materials.
- There is a general lack of Infrastructure (Temporary Office Space)
- Insufficient information Detailed information about the scheme/package was not shared by the kiosks; as some of the beneficiaries we met lamented:
- There are long waiting time at kiosk for completing the identification

Way Forward:-

- Awareness: Government should set up stalls in various trade-fairs, organize (mega) camps periodically, arrange special outreach programmes in inaccessible regions;
- Conduct more IEC activities involving local communities/youths (like Saksyam Yuva scheme in Haryana)(e.g. Nukkad Play) and local PRIs, local political party cadres (for example Better use social media such as FB/WhatsApp)
- Identification: This Involve the village/ward representatives (such as PRI members)
- Put in place mechanisms for automatic registration using the latest database (Aadhar/Ration Card)
- Overcoming supply side constraints: Put in place a designated Cell with the requisite skill set for carrying out IEC activities. Hire a professional agency to make the IEC materials in regional languages.

Swarn Singh

Jobless growth

GS PAPER-3, GROWTH

SOURCE-pib

Context-

- Jobless growth is an economic phenomenon in which a macroeconomy experiences growth while maintaining or decreasing its level of employment.
- The Indian growth experience of the last decade can be called jobless growth as the rate of employment growth is less than population growth.

The following aspects can be highlighted regarding this:

- While the share of employment has largely declined in the Agriculture sector, the Service and Manufacturing sectors have failed to absorb all the people shifting from the agriculture sector.

- The rapid rise of employment opportunities in the informal or unorganized sector in recent years is another aspect of employment generation in India, which further marginalizes labor.
- While the IT or Service Sector has been the spearhead of economic growth in India after the advent of globalization, they can't absorb any significant labor. Because the sector requires highly skilled people only.
- During 2005-10, only 1 million net jobs per annum were generated in the organized sector, whereas 60 million people entered the labor market of India.
- **Large scale unemployment** among engineering graduates, postgraduates like MBA and doctorates are other examples of jobless growth. This is the reason why lakhs of students including engineers, MBA or Ph.D. students applied for only 300 posts of peon in Uttar Pradesh.

Way Forward-

- The answer to jobless growth lies in policy initiatives that will promote the manufacturing and services sector. Reforms in labor laws, provision of infrastructure, encouragement of small-scale industries, and promotion of export-oriented light industries that are manpower intensive are some of the policy initiatives that are required.
- **The experiences of developed** countries have demonstrated that the growth of smaller businesses can drive employment generation.
- Further education and skill development is the need of the hour to increase employment with economic growth by harnessing the potential of demographic dividend.

Khyati Khare

Loan to Srilanka

(GS PAPER -2, India and its neighborhood

Source- The Hindu)

Context-

- India has signed an agreement extending a USD 100 million Line of Credit (LOC) to its neighbor Sri Lanka for projects related to the Solar Energy Sector.
- This LOC is for a period of 20 years, with an interest of 1.75%.
- This agreement was signed between the [Government of Sri Lanka](#) and the Export-Import (EXIM) Bank of India.
- EXIM Bank is a specialized financial institution and is solely owned by the Government of India.

What is Line of Credit-

- [It is a credit facility](#) extended by any bank or any other financial institution to a government, business, or individual customer, that can enable the customer to draw the maximum loan amount.
- The borrower can access funds from the line of credit at any point of time as long as they do not exceed the maximum amount (or credit limit) set in the signed agreement and meet any other requirements such as making timely minimum payments etc

Significance of the Line of Credit-

- It will help Srilanka to finance various projects in the solar energy sector such as rooftop solar photovoltaic systems for households and government buildings.
- Some of these projects were already announced during the Founding Conference of the International Solar Alliance (ISA).

International Solar Alliance-

- This initiative was launched by the Indian Prime Minister and the President of France in 2015 on the sidelines of the United Nations Climate Change Conference of Parties (CoP 21) with 121 solar resource-rich countries lying fully or partially between the tropic of Cancer and tropic of Capricorn as prospective members.
- 89 countries have signed the ISA framework agreement up to 2021.
- Its' vision is to enable One World, One Sun, One Grid (OSOWOG).

Khyati Khare

Deep Ocean Mission

**(GS PAPER-2, GOVERNMENT POLICIES,
AND INTERVENTIONS**

SOURCE- THE HINDU)

Context:

- The government of India has approved the 'Deep Ocean Mission' to study biodiversity, the impact of climate change, and the establishment of an offshore marine station to explore sources of thermal energy.

About:

- [The Ministry of Earth Sciences](#) has proposed a 'Deep Ocean Mission' aiming to explore the Deep Ocean for searching resources and to develop deep-sea technologies for unceasing use of ocean resources.
- The project is a five-year mission to be implemented in phases with an estimated cost of Rs4,077 crore. The first phase of the project is for three years (2021-2024).
- Indian Organizations such as ISRO, BARC, CSIR, DRDO, the Department of Biotechnology, and some other bodies will assist the Ministry of Earth Sciences in its implementation.
- The expertise and technology for this mission are available only in five countries- the US, Russia, France, Japan, and China.
- India is the sixth country to adopt this technology.
- This mission will explore strategic polymetallic nodules such as Copper, Nickel, Cobalt, and Manganese in the Central Indian Ocean basin.
- "The mission will also focus on changes, because of climate change, to study more deep-sea biodiversity.
- It will also conduct a deep-sea survey.

- There is also the establishment of an advanced marine station for ocean biology and also an offshore ocean station (to explore) thermal energy as part of the mission.
- It will conduct research on climate variables and support the Blue economy of the country that includes marine fisheries, off-shore energy, and coastal tourism.

Six components of the mission:

1. Development of high-end technologies for deep-sea mining and manned submersible
2. Development of ocean climate change advisory services
3. Technological innovations for deep exploration and conservation of deep-sea biodiversity
4. Deep ocean survey and its exploration
5. Off-shore ocean energy and freshwater from the ocean
6. Advanced establishment of marine station for ocean biology

Khyati Khare