KURUKSHETRA SUMMARY

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RURAL INFRASTRUCTURE

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Summary of Kurukshetra

July 2021

Theme: Rural Infrastructure

Contents

Rural Transformation through Bolstered Infrastructure

Introduction

- Infrastructure is one of the five inherent pillars of AtmaNirbhar Bharat, the other four being economy, technology-driven system, vibrant demography and demand.
- Infrastructure being a public good, a crucial role is played by the Government in creating and maintaining infrastructure assets.

Some Recent Initiatives

- Budget 2021-22 underscored the need to focus on infrastructure, in the backdrop of the pandemic, by making a large number of announcement for this sector.
    - These ranged from Production Linked Incentive Schemes to Mega Textile Parks;
    - From strengthening the National Infrastructure Pipeline to proposing the creation of Development Financial Institution;
    - From asset monetization to increasing capital budget etc.
- An important loan agreement was signed between Government of India, and the New Development Bank in December 2020 to create durable rural infrastructure assets through natural resource management works and to generate employment to stimulate rural demand.
- GOI had set up the Rural Infrastructure Development Fund (RIDF) within National Bank for Agriculture and Rural Development (NABARD) way back in 1995-96.
- The Garib Kalyan Rojgar Abhiyan was launched in June 2020 to provide immediate employment and to create livelihood opportunities for reverse migrants and to strengthen rural infrastructure.
- The Mahatma Gandhi National Rural Employment Guarantee Scheme serves the two fold objectives of providing livelihood security and creation of durable rural assets.
- The Pradhan Mantri Awas Yojana-Gramin aims to provide pucca houses with basic amenities to all rural houseless households and households living in kutcha and dilapidated houses in rural areas.
- National Agriculture Market also referred to as e-NAM has created a virtual platform which integrates wholesale mandis across the country.
    - The objective is to ensure remunerative prices for farmers by facilitating online trading of agriculture and horticulture commodities.

- In 2018-19, an Agri-Market Infrastructure Fund with a corpus of Rs. 2000 crore had been announced. The Fund would be instrumental in upgrading agriculture marketing infrastructure.
- The Jal Jeevan Mission has the objective of enabling rural households to have assured potable water through household tap connections.
- In October 2017 PRadhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya was launched for electrification of poor households, including rural households.
- The Bharat Net project is being implemented to provide broadband connectivity to 2.5 lakh Gram Panchayats.
- Taking the Digital India initiative of providing easier and better connectivity one more step forward, in August 2020 it was announced that over the next 1000 days all 6 lakh villages in the country would be connected with optical fibre cable, including the islands of Lakshadweep which would be connected with submarine optical fiber cable.

Conclusion

- A reinforced rural infrastructure can accomplish India's mission of an AatmaNirbhar Bharat.
- Better rural infrastructure, be it surface, air or water transports, telecom, rural marketing, warehouses or water supply and power, is capable of facilitating better avenues for rural growth and of appropriately remunerating the activities of the farmers, manufacturers and service providers in a rural set up.
- A bolstered rural infrastructure contributes to rural transformation through its multiplier effect.
- Thus, there is a dire need to ensure building and strengthening rural infrastructure to ensure income and livelihoods to millions of rural inhabitants including the reverse migrants.

Rural Irrigation Infrastructure under PMKSY

Irrigation infrastructure

- Pradhan Mantri Krishi Sinchayee yojana (PMKSY) through its components can provide end-to-end solutions in irrigation supply chain viz. water sources, distribution network and farm level application provided this scheme is implemented effectively at the ground.

- The Government's budgetary and policy interventions for PMKSY – Har Khet Ko Pani are directed towards identification, eview revival and expeditious execution of the ground water irrigation interventions by taking up potential cases in deprived irrigation districts.

- During 2016-17, it was decided to prioritise 99 ongoing major/medium irrigation (MMI) projects under Accelerated Irrigation Benefit Programme (AIBP) component of PMKSY with an objective to create an incremental irrigation potential of 11.09 lakh hectares against a total AIBP target of 151.33 lakh hectares.

- Per Drop More Crop initiative implemented by Department of Agriculture, Cooperation and Farmers Welfare, has laid enormous focus on enhancing water use efficiency at farm level through Micro Irrigation technological interventions viz. Drip, Sprinkler Irrigation, Pivots and Raining guns. Etc.

- Similarly the Watershed Development component of PMKSY targets to develop rain-fed portions of the cultivated area and culturable wastelands through ridge-are treatment, drainage like repair and renovation, soil and moisture conservation, rain water harvesting, nursery raising, plantation and afforestation, etc. with an objective to ensure drought proofing and prevention of soil erosion, vegetation, rain water harvest and recharge the ground aquifer.

- The time has come to understand the value of water and its efficient use for irrigation.

- Minor irrigation interventions have tremendous influence on not only water saving and conservation drives, but also, they support in enhancing crop-specific water use efficiency at farm level through precision or MI and better on-farm water management practices.

- Further, State Government's initiatives aiming at reducing water demand for agriculture complement the drive of the Union Government in sustaining irrigation infrastructure.
    - o For eg., while there is ban on early sowing of paddy by Haryana and Punjab, low water intensive crops are incentivized through Haryana's Jal Hi jeevan Hai scheme.

PMKSY: Output, Outcome and Constraint

Component	Output	Outcome	Problems/Constraints
1	2	3	4
Per Drop More Crop (D/o Agriculture, Cooperation and Farmers Welfare)	▪ Making available efficient water conveyance and precision water application devices - sprinklers, drips, pivots, rainguns, etc. ▪ Provisioning of protective irrigation facilities in rain-fed agriculture	▪ Increased crop productivity, enhanced farmer income ▪ Improved water use efficiency	▪ Durability of the assets created and or provided under the sub-scheme ▪ Maintenance challenges and cost pressures ▪ Lack of adequate scientific knowledge, training & awareness amongst the farmers ▪ Lack of knowledge about crop diversification
Watershed Development (Department of Land Resources)	▪ Focusing on development of rainfed portions of the net cultivated area and culturable wastelands through ridge area treatment, drainage line treatment, soil and moisture conservation, rain water harvesting, nursery raising, afforestation, horticulture, pasture development, livelihood for asset less persons, etc.	▪ Drought-proofing ▪ Prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. ▪ Multi-cropping to provide sustainable livelihoods	▪ Rainfall uncertainty, poor economic conditions of the farmers and gradual land degradation in the rainfed areas ▪ Reduced flow of water to downstream reservoirs for improper development of watershed in the upstream. ▪ Lack of convergence planning and coordination amongst department of Rural Development, Panchayati Raj, Agriculture, forest, etc.
Har Khet Ko Pani (Ministry of Jal Shakti)	▪ Source augmentation, distribution, ground water development, lift irrigation, diversion of water from water plenty to water scarce areas, repair, restoration, renovation of traditional water bodies.	▪ Enhance crop yields ▪ Increase farmers' income ▪ Replenish ground water ▪ Improve water availability ▪ Accelerated implementation of advanced stage irrigation projects held up due to financial constraints up to 2019	▪ Gaps in the planning and implementation ▪ Awareness level of farmers on the benefits of the irrigation programme. ▪ Time and cost over-run due to delays in completion of irrigation works taken up. ▪ Unavailability of forest/environment clearances ▪ Lack of consensus amongst locals leading to resistance and conflicts
Accelerated Irrigation Benefit Programme (Ministry of Jal Shakti)	▪ focusing on faster completion of ongoing Major and Medium Irrigation projects including National Projects		

Conclusion

- Water- the lifeline of agriculture is a basic necessity for all living beings and is essential for food production, food security, alleviation of poverty and ensuring sustainable development.

- Frequent dry-spells, reduced availability of ground water for irrigation and the resultant droughts and drought like situations impacts Indian agricultural production and productivity.

- This calls for registering higher degrees of water use efficiency by installing modern and innovative irrigation infrastructure network in the country.

PMGSY: Road to Prosperity

- The Pradhan Mantri Gram Sadak Yojana (PMGSY) was launched in December, 2000 as a key programme of Ministry of Rural Development to provide road connectivity in rural India.

- The basic objective of the PMGSY was to connect all habitation with population of more than 1000 with all-weather roads by 2003.

- By 2007, it aimed to connect all the habitation with greater than 500 population in plain areas and greater than 250 persons in desert, hilly and tribal areas.

- To facilitate connectivity, PMGSY permits both, construction of new roads as well as upgradation of existing roads.

- In May 2013, the Central Government launched PMGSY-II to consolidate the existing rural road network and ot improve its overall efficiency as a provider of transportation services to people, goods and services.
  - The basic objective was to enhance the economic potential of rural India and make rural economic hubs through enhanced connectivity.

- In December 2019, the Government of India launched PMGSY III for consolidation of through routes and major rural links connecting habitation, as well as rural markets, educational institutions, health institutions etc.
  - Through PMGSY-III use of modern technology in planning and implementation has been introduced.
  - Geo referencing and geo-tagging of rural facilities are done through the app GEO-PMGSY and 'trace maps' are prepared highlighting important facilities in villages and shortest routs to connect them.

Special Initiative for North Eastern State and Left Wing Extremism Affected Areas

- Special attention has been given to North Eastern states due to their strategic location and climatic position.

- Financial burden of these states have been eased.

- Similarly, in order to provide seamless connectivity to difficult and remote areas which are also affected by Left wing Extremists violence, the government has started a special project with effect from December 2016, as a vertical under PMGSY known as 'Road Connectivity Project for Left Wing Extremism Affected Areas.

- The primary focus of this project is to reduce the level of physical and functional isolation of human beings via improving the road connectivity.

e-Marg

- In 2019, the Ministry has launched Electronic Maintenance of Rural Roads under PMGSY (eMARG) in all states.

- It is an initiative of smart application of information technology which integrate date across the department and monitor maintenance status of rural roads and suggest necessary action.
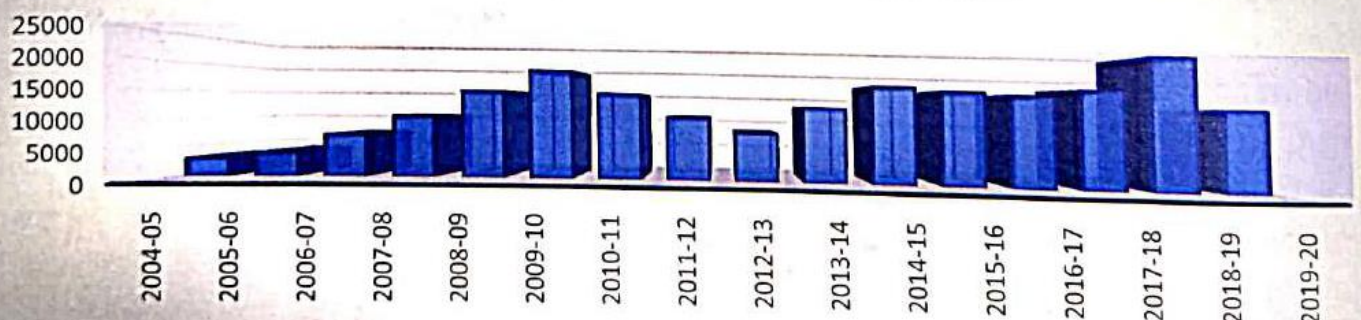
Impact of PMGSY on Rural Development

- **Impact on Income and Poverty**
  - The implementation of PMGSY has brought significant impact in the lives of the poor in Indian villages.
  - It is found that over the period of 2005 to 2009 the program has caused 0.1 to 1.4 percentage point reduction in the rural poverty rate.
  - It has also been found that with new roads in rural areas new/additional employment and business opportunities has been generated.
  - Time saving due to new connecting road is resulting in better access to employment and business opportunities.
  - Along with this it has been found that, due to implementation of rural roads there is a shift in distribution of primary source of income from cultivation and self employment to unskilled wage labour.

Yearwise Expenditure under PMGSY

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
EXPENDITURE	3091	4100	7304	1061	1516	1883	1491	1094	8387	1309	1714	1654	1609	1730	2336	1429

- **Increase in Rural Accessibility**
    - PMGSY has connected villages which has increased rural accessibility.
    - Construction of new roads based on population criteria as used in PMGSY progamme increases the overall accessibility in region, though the impact is more in areas with high population density.
    - With the introduction of PMGSY the traditional transport mode has been replaced by motorized vehicle, which has made transport service quick and efficient.

- **Impact on Livelihood**
    - Rural roads, constructed under PMGSY has made access to markets easier for the farmers, which has improved information and extension services and also impacted the cultivation choices and therby resulted in positive changes in cropping patterns.
    - Villagers can smoothly access chemical fertilisers, HYV seeds, pesticides, insecticides, herbicides etc.
    - There have been a shift from traditional food crops to vegetable and fruits.
    - There has also been a shift of livelihood pattern from cultivation to unskilled non-farm work.

- **Impact on Health and Education**
    - There is huge improvement in health service accessibility.
    - It has eased the approachability to medical facilities.

- o Reduction in travel time to health centre, pre and post natal care, increase in institutional delivery and more frequent visit of doctor and health workers in villages have created positive impact on health outcome of rural India.
- o Better nutrition form enhanced income and the girls reaching motherhood being better educated have worked positively in this direction.

Conclusion

- After twenty years of implementation, the PMGSY programme has emerged and evolved to be a key scheme for rural development.
- It has made significant change in connecting rural areas and through which, livelihood, agriculture pattern, health, education and lives of people have been shaped in positive way.
- Throughout the years it has not only emerged as a key scheme and enhanced connectivity in rural area, but the scheme also has changed itself, incorporated required changes, adopted cutting edge technology for efficient implementation to evolve as an engine of growth to change lives of people in rural India.

Digital India: Towards a Connected Nation

- Indian government's Digital India programme, which was launched in 2015 is playing a revolutionary role in connecting India by bridging the rural and urban India divide.
- It's vision is to transform India into a digitally empowered society and knowledge economy by providing broadband highways, universal access to mobile connectivity, public internet, e-governance, etc.
- Thus, the launch of Digital India opened a wide spectrum for societal transformation.
- The overarching mission works in partnership with multiple departments and ministries where in each individual programme stands on its own, but also is a part of the larger vision.

Some Key initiatives

- **Aadhar Enabled Payment System**

- o Developed by National Payments Corporation of India, it is a payment service based on an individual's Aadhaar card which enables the owner of the card to make financial transactions such as transfer funds, make payments etc.

- **MyGov**
  - o It promotes participatory governance by providing citizens an opportunity to voice their opinions in policy making and recommendations.
  - o It provides a thriving space for discussions, tasks, talks, interactive polls and blogs on diverse issues related to governance and public policy.

- **National Mission in Education through ICT**
  - o It is a centrally sponsored scheme which aims to leverage the potential of ICT in education through teaching and learning processes in institutions for higher education.

- **Pradhan Mantri Jan-Dhan Yojana**
  - o It is a scheme under the National Mission on Financial Inclusion for the impoverished citizens of India.
  - o It provides access to services of financial nature at affordable rates to boost financial inclusivity and encourage savings.

- **Smart Cities**
  - o It promotes conceptualization and realization of cities that have a strong basic infrastructure and promote sustainable, safe and inclusive development for its residents by availing clean sustainable environment via application of 'Smart' solutions.

- **E-Pathshala**
  - o NCERT's e-Pathshala is a platform to disseminate educational resources through mobile app and website.

- **E-Prison**
  - o It envisions digitization and integration of all activities that are related to prison and prisoner management for jails through an application suite.

- **Farmer Portal**
  - o It is designed to be a one-stop destination to gain relevant information related to agriculture, risk management, animal husbandry, aquaculture, weather, programmes and schemes.

- **Goods and Services Tax Network**

- o It manages the IT system of the GST portal and acts as the backbone of the GST system and acts as the core database for it.
- o The network helps the government follow financial transactions and helps the tax-payers with GST registration, maintenance of tax details, etc.

- **Khoya Paya**
  - o It is an initiative under Digital India to engage citizens to inform and exchange information on children who are missing and found.
  - o It is developed by the Ministry of Women and Child Development along with the Department of Electronics and Information technology where citizens can report missing and found children with the help of texts, photos, videos and other means through smart phones.

- **Kisan Suvidha**
  - o This is a mobile app that disseminates relevant information to farmers regarding weather, market prices, plant protection, inputs, weather alerts, storages, market related information etc.

- **National Knowledge Network**
  - o It is a pan-India network with an aim to help in connecting India's universities, libraries, labs, research institutes across the country to improve inter-communication, stimulate research and create next gen apps and services.

- **Online Labs (OLABS)**
  - o It is a virtual learning platform, created to help students conduct over 130 virtual lab practical to grasp concepts in Chemistry, Physics, Biology from class 9-12 and lessons in English and Maths for class 9 and 10.

- **Project Monitoring Website for E-courts**
  - o It has been created to aid courts with automated decision-making and decision-support system.
  - o While the main objective of the project was to streamline administrative activities in courts, the e-Courts project policy action plan document also envisions a larger vision for the judicial system of India.

- **Swachh Bharat App**
  - o It is a sanitation and cleanliness centric campaign which engages citizens with cleanliness initiatives as well as subsidized toilet construction scheme for the impoverished population of rural and urban India.

- **Unified Mobile Application for New-age Governance (UMANG)**

- o Developed by the Ministry of Electronics and Information Technology and National e-Governance Division to promote e-governance in India, it facilitates over 1200 central and state e-services.
  - o This app is multi lingual and accessible through smart phones, tablets and desktops etc.

- **AADHAR**
  - o It is world's largest biometric based identification system.
  - o The unique identities issued under Aadhar is at the heart of social and financial inclusion, public services deliver, aiding to create better policies and reforms and creating a more transparent and automated governance for the people.

- **Government e-Marketplace (GeM)**
  - o It is an e-marketplace initiative by the National Public Procurement Portal that enables government departments and public sector entities to procurement common use goods and services.
  - o The users of this marketplace are state and central government ministries and departments, public sector undertakings, local bodies and autonomous institutions.

- **Crime and Criminal Tracking Network & Systems (CCTNS)**
  - o It is a project under National e-Governance Plan of the Government of India.
  - o It aims at creating a system that is comprehensively integrated to enhance the efficiency of policing through a creation of a nation wide networking infrastructure for the evolution of IT-enabled highly efficient tracking system around the investigation and detection of crimes and criminals.

- **Revolution in Digital Payment**
  - o India's unique payment system such as BHIM-UPI and BHIM-Aadhaar are getting recognized globally.
  - o In 2020 India ranked 1st in digital payment transaction worldwide.

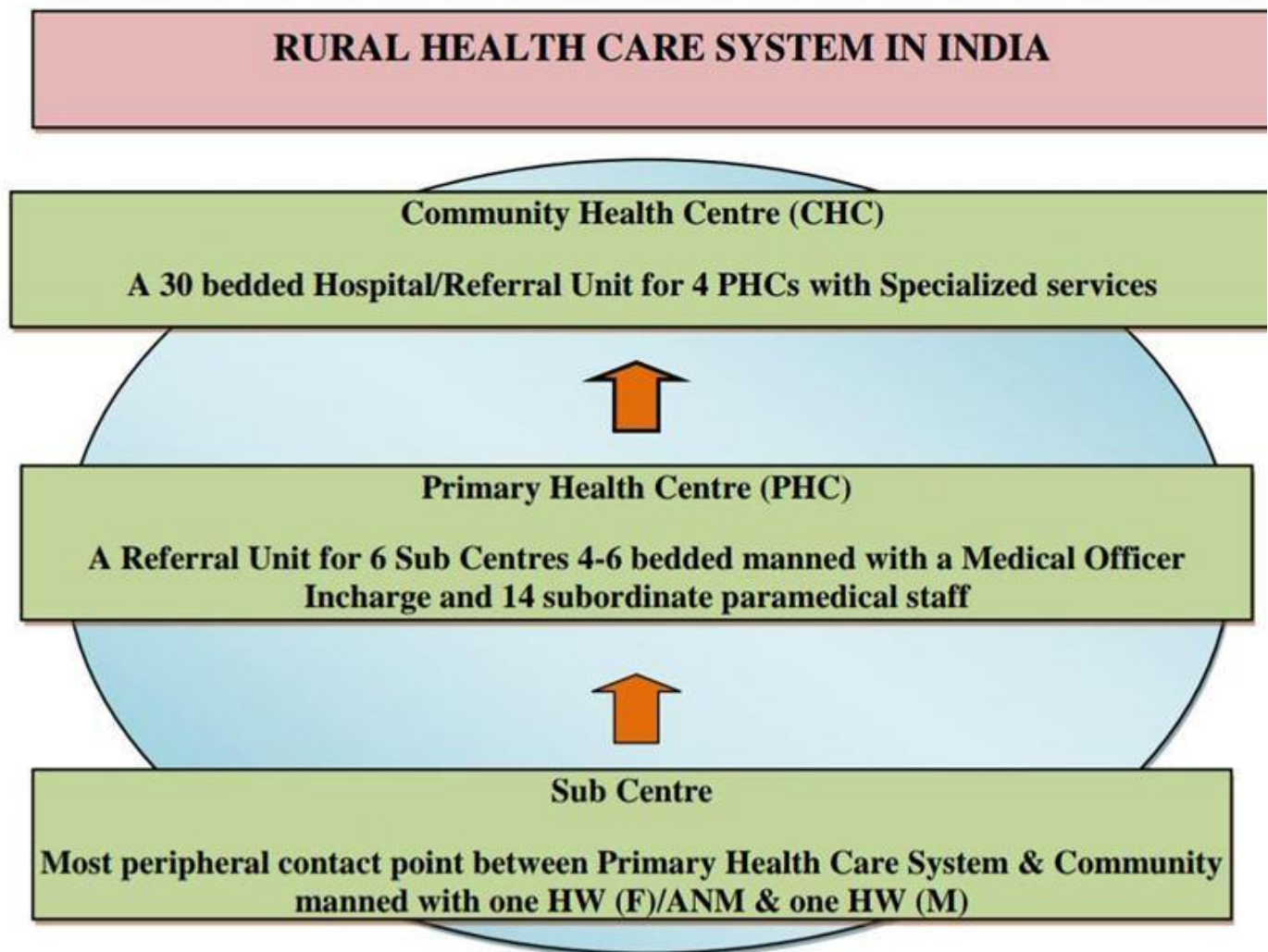# Augmenting Rural Healthcare Infrastructure

- India has made significant advances in creating access to quality, free and universal healthcare for individual and populations over the decade, reducing the gap between rural and urban areas and between the rich and the poor.

- However, with more than 70 percent population residing in rural areas, rural health care remains one of the challenges being faced by the country.

- That is why availability and accessibility of healthcare facilities, and building and sustaining health infrastructure is a big priority for policy planners especially in the backdrop of the COVID-19 pandemic.

Rural Healthcare System in India

- The health care infrastructure in rural areas has been developed as a three tier system and is based on the following population norms:

RURAL HEALTH CARE SYSTEM IN INDIA

Community Health Centre (CHC)

A 30 bedded Hospital/Referral Unit for 4 PHCs with Specialized services

Primary Health Centre (PHC)

A Referral Unit for 6 Sub Centres 4-6 bedded manned with a Medical Officer Incharge and 14 subordinate paramedical staff

Sub Centre

Most peripheral contact point between Primary Health Care System & Community manned with one HW (F)/ANM & one HW (M)

- The healthcare market is expected to increase about three fold by 2022.
- The health care services and systems in India continue to develop and there is a scope for improvement required in terms of workforce shortages, infrastructure and quality of care.
- India's public health expenditure has increased from 0.9 % of GDP in 22015-16 to 1.1 percent of GDP in 2020-21.

- The Economic Survey of 2020-21 observed that India ranks 179th among 189 countries in prioritizing healthcare in the government budget.

- Notably, the National Health Policy, 2017 aims to increase public health expenditure to 2.5 percent of the GDP by 2025.

- In India, 75% of the healthcare infrastructure is concentrated in urban areas where only 27 percent of the total Indian population is living.

- Private healthcare has been witnessing steady growth whereas there is a serious need to have good quality or infrastructure in the public healthcare sector.

- Health infrastructure and enhancing service delivery by training human resources in healthcare are crucial for achieving objectives of an Aatmanirbhar Bharat.

Health care infrastructure in India can be categorized into Physical infrastructure and Human resources who provide medical services.

Physical Infrastructure

- Depending on the level of care required, healthcare in India is broadly classified into three types.

- This classification includes primary care (provided at primary health centres), secondary care (provided at district hospitals) and tertiary care institutions (provided at specialized hospitals like AIIMS).

- Primary health care infrastructure provides the first level of contact between health professionals and the professionals and the population.

  o Broadly based on the population served and the type of services provided, primary health infrastructure in rural areas consists of a three tier system

  o This includes Sub Centres, Primary Health Centres and Community Health Centres.

Human Resources in Health

- The Economic Survey 2020-21 observed that the aggregate density of health workers is 23 per 10,000 population which is significantly lower than that recommended by WHO to achieve the ustainable Development Goals targets by 2030.

- As of 2019, there is 1 doctor per 1511 people and 1 nurse per 670 people, which is lower than the WHO standard of 1 doctor per 1000 people and 1 nurse per 300 people.

Pradhan Mantri Jan Arogya Yojana (PMJAY)

- The Ayushman Bharat programme – PMJAY was launched in September 2018-19.

- It aims to provide an insurance cover of Rs. 5 lakh per family per year to 10.7 crore poor families.

- The scheme subsumed two centrally sponsored schemes, namely, Rashtriya Swasthya Bima Yojana and the Senior Citizen Health Insurance Scheme.

- The scheme provides insurance coverage for secondary and tertiary healthcare.

- The scheme provides 1350 medical packages such as surgery, cost of medicines, days care treatments and diagnostics.

- In addition, the scheme provides for pre and post hospitalization expenses.

Out-of-Pocket Expenditure

- Out of pocket expenditure is the payment made directly by individuals at the point of service where the entire cost of the health service is not covered under any financial protection scheme.

- Most of the out of pocket expenditure made by the consumers is on pharmacies (47 percent), private general hospitals (31 percent), government general hospitals (8 percent), medical and diagnostics (7 percent) and towards patient transport and emergency rescue (7 percent).

- The Economic Survey 2020-21 observes that the overall out-of pocket expenses in India on healthcare are 60 percent of the total expense of public health.

Pradhan Mantri Swasthya Suraksha Yojana

- It was introduced in 2003 with objective of :
  - Correcting regional imbalances in the availability of affordable and reliable tertiary healthcare services and
  - Augmenting facilities for quality medical education in the country.
    - This includes establishing AIIMS like institutions and upgrading certain state government hospitals.

Way Forward:

- India's healthcare policy must continue to focus on long term health care priorities despite the setback from the pandemic.
- Both demand and supply side constraints in the healthcare sector needs to be addressed.
- Effective handling of communicable disease by building adequately trained health emergency response teams and setting up dedicated control rooms at district level.
- Controlling rising non-communicable diseases prevalent in India, partially through awareness campaigns on healthy lifestyle.
- Strengthening the primary healthcare facilities with adequate human resource and equipment.
- Providing universal health coverage and extensive promotion and utilization of Ayushman Bharat's PMJAY and health and wellness centres.
- A standardized system for quality reporting on healthcare for hospitals, physicians and insurance companies is a must to benchmark such services.
- Last but not the least, to root out 'quacks' from the system and tackle information asymmetry in the healthcare sector. Regulation and supervision of the healthcare sector needs to brought in with more vigour, such as an independent sectoral regulator.

Conclusion

- The impact of the pandemic, especially the lockdown strategy in the social sphere is multi-dimensional.
- India's healthcare system has been improving with well meaning policy reforms, however, there is substantial potential by making use of technological advances in order to improve health outcomes.
- Increasing access and utilization; bringing down high out of pocket health expenditure; dealing with inequity in availability of healthcare and human resource for health; will benefit in the long term.
- Both the supply and demand side factors of healthcare needs urgent attention.
- The supply side of the health sector in terms of physical infrastructure and human resource needs to be scaled up significantly.