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Mission Indradhanush

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Rural Health
Mission Indradhanush

The Ministry of Health & Family Welfare has launched “Mission Indradhanush”, depicting seven colours of the rainbow to fully immunise more than 80 lakh children who are either unvaccinated or partially vaccinated, those that have not been covered during the rounds of routine immunisation for various reasons. They will be fully immunised against seven life-threatening but vaccine-preventable diseases which include diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis B. In addition, vaccination against Japanese Encephalitis and Haemophilus influenzae type B will be provided in selected districts/states of the country. Pregnant women will also be immunised against tetanus.

The first round of the first phase started from 7 April 2015; World Health Day in 2015 high focus districts in 28 states and carried for more than a week. This will be followed by three rounds of more than a week in the months of April, May and July 2015, starting from 7th of each month. The 2015 high focus districts account for nearly 50% of all unvaccinated or partially vaccinated children in the country. Of these, 82 districts are in just four states of UP, Bihar, Maharashtra and Rajasthan and account for nearly 25% of all unvaccinated or partially vaccinated children of the country.

Within the districts, the Mission will focus on 4,00,000 high risk settlements identified as pockets with low coverage due to geographic, demographic, ethnic and other operational challenges. These include nomads and migrant labour working on roads, construction sites, riverbed mining areas, brick kilns, and those living in remote and inaccessible geographical areas and urban slums, and the undernourished and hard to reach populations dwelling in forested and tribal areas.

Total of 297 districts will be targeted in the second phase to commence from September 2015.

Achievements in the first round of first phase (7-16 April 2015)

- 2,1 lakh sessions held
- 54.4 lakh antigens administered
- 5.8 lakh pregnant women immunised
- 2.5 lakh pregnant women fully immunised
- 20.8 lakh children immunised
- 55% of these are from Uttar Pradesh
- For approx. 20%, this was their first contact
- Approx. 24% belonging of <5 years of age
- 4.7 lakh children fully immunised

The preparation and learning during the implementation of the first round have led to health systems strengthening in terms of drawing up detailed micro plans, designing study frameworks for stringent monitoring and evaluation of the immunisation rounds in the states (more than 3000 state and central level monitors have been deployed), training of nearly 9 lakh frontline workers; identification and analysis of limiting factors in different states leading to creating effective structures to mitigate them.

The children immunised under Mission Indradhanush are in addition to the children who are immunised under the Universal Immunisation Programme.
Kurukshetra seeks to carry the message of Rural Development to all people. It serves as a forum for free, frank and serious discussion on the problems of Rural Development with special focus on Rural Uplift.

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Editorial

In a major boost to the Indian health sector, the government plans to double the public health expenditure from the current level of 1.2 per cent of the Gross Domestic Product (GDP) to 2.5 per cent, which would mean spending an additional 3 lakh crore rupees plus on health.

The intent of the government is contained in the draft National Health Policy 2015, which is currently in the consultation phase, and when adopted will replace the earlier Health Policy of 2002. India is set to reach the Millennium Development Goals (MDGs) with respect to maternal and child survival. The Government recognises immunization as one of the most cost effective interventions to prevent child deaths. India’s Universal Immunization Programme is one of the largest public health interventions in the country with an extensive vaccine delivery system with 27000 vaccine storage units in 35 states across the country. In March this year, the Prime Minister launched the first indigenously developed and manufactured rotavirus vaccine.

The three-dose ROTAVAC vaccine, developed through collaboration between India and the United States will bring about a significant reduction in the 100,000 infant deaths caused by the rotavirus diarrhoea in India.

The government proposes to leverage economic growth to achieve health outcomes with an explicit acknowledgement that better health contributes immensely to improved productivity as well as to equity.

In this issue we discuss the health infrastructure, policy and distribution of medicine and academicians, and specialists discuss the road ahead in making the people of the country healthy.

On the distribution side, to make medicine available at cheaper rates to far flung places the government has regulated price of drugs, especially life saving drugs so that they are accessible to majority of the population.

Recently, the government has scrapped custom duties on drugs and test kits used to treat AIDS in an effort to cut prices across the country.

With a policy to double spending on health and devise innovative methods of health management there is renewed hope that the people of the country will have greater access to facilities and be healthier.
This National Health Policy addresses the urgent need to improve the performance of health systems. It is being formulated at the last year of the Millennium Declaration and its Goals, in the global context of all nations committed to moving towards universal health coverage. National Health Policy is a declaration of the determination of the Government to cover economic growth to achieve health outcomes and an explicit acknowledgement that better health contributes immensely to improved productivity.

There are many infectious diseases which the system has failed to respond to – either in terms of prevention or access to treatment. Then there is a growing burden of non-communicable disease. The second important change in this context is the emergence of a robust health care industry growing at 15% compound annual growth rate (CAGR). Thirdly, incidence of catastrophic expenditure due to health care costs is growing and is now being estimated to be one of the major contributors to poverty. The drain on family incomes due to health care costs can neutralize the gains of income increases. The fourth change is that economic growth has increased the available fiscal capacity. Therefore, the country needs a new health policy that is responsive to these contextual changes. The political will to ensure universal access to affordable healthcare services in an assured mode – the promise of Health Assurance – is an important catalyst for the framing of a New Health Policy in a developing India.

Aim of the National Health Policy

The primary aim of the National Health Policy, 2015, is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions- investment in health, organization and financing of healthcare services, prevention of diseases and promotion of good health, developing human resources, encouraging medical
pluralism, building the knowledge base required for better health, financial protection and regulation and legislation for health.

Comparative Health Investment Analysis

A comparative analysis of the government expenditure on Defence, Education and Health in developed and developing countries reveal that the investment on health sector in India is lowest in the world.

The above (Table – I) reveals that the percentage of total expenditure on Health sector is India is only 4.2 percent as per the World Development Report 2009. A comparative analysis of health investment reveals that the performance of Sri Lanka, Bangladesh in the health sector is more satisfactory compared to India. The health investment in Bangladesh is about 5.3%, Sri Lanka, 6.2% Pakistan 2.05%, UK 15.7%, USA 18.6% while in Germany it is 20%. The table shows there is certainly a downward trend in health investment in India.

Global Investment in Health Care

Despite years of strong economic growth and increased Government health spending in the 11th Five Year plan period, the total spending on healthcare in 2011 in the country was about 4.1% of GDP. Global evidence on health spending shows that unless a country spends at least 5–6% of its GDP on health and the major part of it is from Government expenditure, basic health care needs are seldom met. The Government spending on health care in India’s expenditure on health care is only 1.04% of GDP which is about 4 % of total Government expenditure. This translates in absolute terms to Rs.957 per capita at current market prices. The Central Government share is Rs.325 (0.34% GDP) while State Government share translates to about Rs.632 on per capita basis at base line scenario. Perhaps the single most important policy pronouncement of the National Health Policy 2002 articulated in the 10th, 11th and 12th Five Year Plans, and the NRHM framework was the decision to increase public health expenditure to 2 to 3 % of the GDP. Public health expenditure rose briskly in the first years of the NRHM, but at the peak of its performance it started stagnating at about 1.04 % of the GDP. The pinch of such stagnation is felt in the failure to expand workforce, even to train and retain them. This reluctance to provide for regular employment affects service delivery, regulatory functions, management functions and research and development functions of the Government. Though there is always space to generate some more value for the money provided, it is unrealistic to expect to achieve key goals in a Five Year Plan on half the estimated and sanctioned budget. The failure to attain minimum levels of public health expenditure remains the single most important constraint.

Role of State and the Centre

According to NH Policy one of the most important strengths and at the same time challenges of governance in health is the distribution of responsibility and accountability between the Center and States. Though health is a State subject, the Centre has accountability to Parliament for central funding – which is about 36% of all public health expenditure and in some states over 50%. Further it has its obligations under a number of...
international conventions and treaties that it is party to. Further, disease control and family planning are in the concurrent list and these could be defined very widely. Finally though State ownership has been used by some states to become domain leaders and march ahead setting the example for others.

The Centre has a responsibility to correct uneven development and provide more resources where vulnerability is more. The way forward is for equity sensitive resource allocation, strengthening institutional mechanisms for consultative decision-making and coordinated implementation and provision of capacity building and technical assistance to States. The main challenge at both Centre and States are strengthening the synergistic functioning of the directorate as the technical leadership and the civil services as the administrative leadership and coordinating both of these with the increasing number of State owned or fully state financed corporations, and registered societies and autonomous or semi-autonomous institutions.

**Budget allocation for Flagship Schemes**


The ICDS success depends on the Anganwadi worker a woman who is the pilot of the programme. The scheme is government’s main weapon to combat child malnutrition. The expenditure towards health in India under NRHM is gradually showing increasing trend. The investment for NRHM in 2006 was Rs. 7786 crores in 2008-09 Rs. 11988 crores while in 2013-14 the out lay on NRHM was about Rs. 16972 crores. However, India’s achievement on the Health front is not encouraging due to faulty implementation of public health policy (PHP).

**Mental Health – Psycho-social Support**

One public health priority that needs urgent attention is the state of neglect of mental health issues. The gap between service availability and needs is widest here- 43 facilities in the nation with a 0.47 psychologists per million people. Improving this situation requires simultaneous action on mental health. Integration with the primary care approach so as to identify those in need of such services and refer them to the appropriate site and follow up with medication and tele-medicine linkages. This would also require specially trained general medical officers and nurses who are able to provide some degree of referral support at the secondary care level in a context where qualified psychiatrists will remain difficult to access for many years. These mid -level psychiatrists would also be enabled by tele-medicine linkages. Supplementing primary level facilities with counselors and psychologists would be useful in several programmes including mental health, such as adolescent and sexual health programmes and HIV control. They could also be charged with creating a network of community members who can provide psycho-social support for such problems.

The key principle around which we build a policy on human resources for health is that workforce performance of the system would be best when we have the most appropriate person, in terms of both skills and motivation, for the right job in the right place, working within the right professional and incentive environment.

A policy framework in human resources for health that is based on the above principle would need to align decisions regarding how and where

| TABLE - II Union Budget Allocation for Flagship Schemes - 2004-2014 (Rs. In Crores) |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ICDS                           | 1802     | 1934     | 3326     | 1088     | 4857     | 5665     | 6026     | 84306     |
| Sarva Shiksha Abhiyan           | 2732     | 4734     | 7166     | 10146    | 12020    | 19040    | 11933    | 10986     |
| Mid Day meal                   | 1375     | 1508     | 3011     | 413      | 6004     | 9514     | 7014     | 9087      |
| NRHM                           | 0        | 0        | 6713     | 7986     | 10708    | 11988    | 14367    | 16972     |
to encourage growth of professional and technical educational institutions, how to finance professional and technical education, how to define professional boundaries and skill sets, how to shape the pedagogy of professional and technical education, how to frame entry policies into educational institutions, how to define and ensure quality of education and how to regulate the system so as to generate the right mix of skills at the right place. Similarly public health institutions would need to have enlightened rules – formal and informal – for attracting, retaining and ensuring adequate numbers of persons with the right skill in the right place. Such policies would have an impact on the growth and work culture of the private sector too. Currently most human resources created, crowds into urban areas, creating a highly competitive market for clients who can pay.

**Revamping Medical Technologies**

India is the pharmacy to the developing world, but about half of its population does not have access to essential lifesaving medicines and the situation is worse when it comes to medical devices and in-vitro diagnostics. India has a great tradition and capacity for innovation in most areas, but despite having the technical capacity to manufacture any drug useful to the common people with ensured marketing facilities. Its role in new drug discovery and drug innovation including in bio-pharmaceuticals and biosimilar, even for its own health priorities is limited. India has a public health system with a stated commitment to providing universal access to free care, but out of pocket expenditures as a proportion on account of access to drugs and diagnostics is prohibitively highest in the world. These are the paradoxes that the national health policy addresses. Learning from the experience and the consensus amongst expert groups that have examined the issue of progress to universal health care, making available good quality, free essential and generic drugs and diagnostics, at public health care facilities is the most effective way at this present juncture. The drugs and diagnostics available free would include all that is needed for comprehensive primary care including all chronic illnesses in the assured set of services. One of the challenges to ensuring access to free drugs and diagnostics through public services is the quality of public procurement and logistics. Public procurement and distribution when well done, as Tamilnadu and more recently Rajasthan has shown, reduces out of pocket expenditures on account of drugs and diagnostics considerably and increases access while limiting irrational prescription practices. Quality assurance of a very high order has also been demonstrated to be possible in such systems.

**Conclusion**

National Health Policy 2015 would play a significant role in improving Medicare and primary health care in India, provided the policy is implemented by the state and central governments with a total responsibility and a political will. The earlier health policies have faced innumerable constraints in implementation. The policy envisages proper implementation of frame work with approved financial allocations with measurable output targets and policy frame work. The implementation frame work would also reflect learning from past experience and identify administrative reforms required to govern public financing, institutional frame work, human resource policies to achieve sustainable development in the field of primary health care in India.

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Rural Health is a state subject. Every state is responsible for raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties. Rural India is home to 68 per cent of India’s total population, and half of them live below the poverty line- struggling for better and easy access to health care and services. Health issues confronted by rural people are many and diverse ranging from severe malaria to uncontrolled diabetes from a badly infected wound to cancer.

Postpartum maternal illness is a serious problem in resource-poor settings and contributes to maternal mortality, particularly in rural India. To improve the status of health of rural India Government has initiated various projects and policies.

Health Budget 2015

Rupees 24549 crores have been allocated in The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) Scheme envisages setting up of new AIIMS-like institutions and upgradation of existing State Government Hospitals. A provision of Rs 2206.00 crore has been earmarked for the scheme during 2015-16. The National Rural Health Mission (NRHM) in April 2005, now renamed as National Health Mission, strives to achieve progress in providing universal access to equitable, affordable and quality health care. Important initiatives for reducing child and maternal mortality as well as stabilizing population have been taken, immunization has been accelerated. Human Resources Development and training of Doctors, Nurses and Paramedics have begun in the right all earnest. All the States have operationalised the Mission and the Health Delivery System is being rejuvenated through additional management, accountancy and planning support at all levels. The Centre: State funding ratio for the NHM will be modified to have higher share from States in view of the higher devolution as per the recommendation of 14th Finance Commission.

By placing Accredited Social Health Activists (ASHAs) in every village, basic health care has been brought closer to the vulnerable groups by giving a boost to Health Education and Promotion.
Health Research: Under the Department of Health Research, Indian Council of Medical Research (ICMR) is the apex body mandated to promote, co-ordinate and formulate biomedical & Health Research. Central Government gives maintenance grants to the Council for Research in health, nutrition, non-communicable diseases and basic research. The Council is also engaged in research on tribal health, traditional medicines and publication & dissemination of information.

To encourage savings and promote healthcare, Finance Minister Arun Jaitley in his budget has increased the limit of deduction under section 80D of the income tax Act from Rs.15,000 to Rs.25,000 on health insurance premium. In case of senior citizens, the limit of deductions has been increased from Rs.20,000 to Rs.30,000. This is a very positive development as it will bring more people into the fold of insurance cover. This should help people to start thinking about insurance when they are young and also buy cover for their families. Public health experts, however, maintain that the government has given incentives the middle class to opt out of the public health system. This is actually providing an option and incentive for middle class to stay out of the public system and go to private hospitals.

Recent Government Initiatives for Rural Health

[1] Insurance Scheme: India is preparing a universal health insurance scheme under Prime Minister Narendra Modi’s personal supervision, which is set to be the world’s largest of its kind, aimed at delivering quality health insurance services to all. (The blueprint of the world’s largest universal health insurance programme is in the process of being sharpened under the Prime Minister’s personal gaze.) It is partially inspired by US President Barack Obama’s grand insurance-for-all project, which is popularly known as ‘Obamacare’. This time the Government aims is to bring about a “complete transformation” of the health sector through research, innovation and the latest technology.

[2] National Health Assurance Mission: The flagship National Health Assurance Mission, aimed at building a robust healthcare support system for the poor, is one of several social welfare schemes centered on the sector to be rolled out by the Present government. In terms of healthcare, medical experts are hoping for a countrywide implementation of the Gujarat model, which has given the state a system that far surpasses any other in India in its efficacy.

[3] Public-private partnership (PPP) model for Health: The Government promotes the public-private partnership (PPP) model. The state has got several corporate hospitals, 13 medical colleges, 1,072 primary healthcare centres, 273 community health centres and 85 mobile healthcare centres. The ratio of emphasis is 80 per cent on primary healthcare, 17 per cent on secondary healthcare and 3 per cent on tertiary healthcare. Recently this model is running only in Gujarat.

The total annual budget of healthcare in Gujarat is 6 per cent, while the current budget in India is one per cent of the total GDP. The doctor to patient ratio in Gujarat is 1:10 and nurse to patient ratio 1:5. If this model is applied at the all-India level, a healthcare system would be better across the nation. [4] The National Health Assurance Mission linked with the Rashtiya Swasthya Bima Yojana (RSBY) was supposed to provide a complete basket of services, including 50 essential medicines, a package of diagnostic services as well as around 30 alternative medicines such as ayurveda, homeopathy, etc., at government hospitals. The private sector hospitals will gain tremendously from the insurance policy of the present government. While we talk about universal health coverage, we are looking at the role insurance companies will pay. There is a reason it is called health ‘assurance’ and not ‘insurance’. The main aim of NHAM is to assure the health to its citizens.

[4] National e-Health Authority: National e-Health Authority (NeHA) as a promotional, regulatory and standards setting organization to guide and support India’s journey in e-Health and consequent realization of benefits of ICT intervention in Health sector in an orderly way. It also spells out the proposed functions and governance mechanism of NeHA. These draw from earlier recommendations of high level bodies in India as also global experience. It is also strongly recommended that NeHA be created at the earliest, as it will give a fillip to all the current
and envisaged programs of the government in respect of IT in Health and accelerated adoption of HER in an orderly manner. It will also help avoid problems arising out of uncoordinated induction of IT systems in hospitals and public health systems which will become inevitable with the passage of time in the absence of a suitable authority to guide and enforce orderly evolution. The Indian health care system is one of India’s largest and most complex sectors. It delivers services to a diverse population of approximately 1.24 billion across a wide range of geographic and socioeconomic settings. Services are provided by a complex network of public and private care providers, ranging from a single doctor rural PHCs (Primary Health Centers) to specialty and super specialty health care institutions like the medical college hospitals in the public sector and from a single doctor outpatient clinic to large trust or corporate hospitals and third party providers in the private sector. Given that India today enjoys a demographic dividend which can contribute to the productivity and prosperity of the nation, the healthcare system is specially and fundamentally important to the country from both an economic and social perspective. A health population underpins strong economic growth, community well-being and prosperity.

Benefits of Electronic Health Record (EHR):
EHR and the ability to exchange health information electronically can help the providers to extend higher quality and safer care for patients while creating tangible enhancements in the efficiency of operations of the organization. EHRs helps providers to better manage care for patients by providing accurate, up-to-date, and complete information about patients at the point of care; access patient records quickly for more coordinated, efficient care; share electronic information securely with patients and other clinicians; diagnose Patients more effectively, reduce medical errors and provide safer care; prescribe more reliably and safer; promote legible, complete documentation and accurate, streamlined coding and billing; improve productivity and work-life balance; and reduce costs through decreased paperwork, improved safety, reduced duplication of testing, and improved health.

National Health Information Authority: The National Knowledge Commission (NKC) had recommended in 2008 formation of National Health Information Authority(NHIA) to support implementation on e-Health. High Level Expert Group (HLEG) set up by Planning Commission in the context of XII Plan had recommended EHR adoption and setting up of a nationwide network to support the same. They had done so as part of recommending Universal Health Coverage. (*Digital India’ Program has been announced by Government of India in August 2014 and a set of on-line Healthcare services are scheduled to be offered as part of the same in a definite time frame in the) next 4-5 years. National eHealth Authority (NeHA): NeHA will be the nodal authority that will be responsible for development of an Integrated Health Information System (including Telemedicine and m-Health) in India, while collaborating with all the stakeholders, viz., healthcare providers, consumers, healthcare technology industries, and policymakers. It will also be responsible for enforcing the laws & regulations relating to the privacy and security of the patients health information & records. Vision/Goals a) To guide the adoption of e-Health solutions at various levels and areas in the country in a manner that meaningful aggregation of health and governance data and storage/exchange of electronic health records happens at various levels in a cost-effective manner b) To facilitate integration of multiple health IT systems through health information exchanges c) To oversee orderly evolution of state-wide and nationwide Electronic Health Record Store/Exchange System that ensures that security, confidentiality and privacy of patient data is maintained and continuity of care is ensured.

[5] Pradhan Mantri Swasthya Suraksha Yojana: The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) aims at correcting the imbalances in the availability of affordable healthcare facilities in the different parts of the country in general, and augmenting facilities for quality medical education in the under served States in particular. The scheme was approved in March 2006. It has been decided to set up 6 AIIMS-like institutions, one each in the States of Bihar (Patna), Chattisgarh (Raipur), Madhya Pradesh (Bhopal),
Orissa (Bhubaneswar), Rajasthan (Jodhpur) and Uttaranchal (Rishikesh) at an estimated cost of Rs 840 crores per institution. These States have been identified on the basis of various socio-economic indicators like human development index, literacy rate, population below poverty line and per capital income and health indicators like population to bed ratio, prevalence rate of serious communicable diseases, infant mortality rate etc. Each institution will have a 960 bedded hospital (500 beds for the medical college hospital; 300 beds for ICU/Accident trauma; 30 beds for Physical Medicine & Rehabilitation and 30 beds for Ayush) intended to provide healthcare facilities in 42 Speciality/Super-Speciality disciplines. Medical College will have 100 UG intake besides facilities for imparting PG/doctoral courses in various disciplines, largely based on Medical Council of India (MCI) norms and also nursing college conforming to Nursing Council norms.

Recent Updates in National Rural Health Scheme: The National Rural Health Mission (NRHM) was launched by the Hon’ble Prime Minister on 12th April 2015, to provide accessible, affordable and quality health care to the rural population, especially the vulnerable groups. NRHM seeks to provide equitable, affordable and quality health care to the rural population, especially the vulnerable groups. Under the NRHM, the Empowered Action Group (EAG) States as well as North Eastern States, Jammu and Kashmir and Himachal Pradesh have been given special focus. The thrust of the mission is on establishing a fully functional, community owned, decentralized health delivery system with inter-sectoral convergence at all levels, to ensure simultaneous action on a wide range of determinants of health such as water, sanitation, education, nutrition, social and gender equality. Institutional integration within the fragmented health sector was expected to provide a focus on outcomes, measured against Indian Public Health Standards for all health facilities.


[2] India Newborn Action Plan (INAP): The India Newborn Action Plan (INAP) is India’s committed response to the Global Every Newborn Action Plan (ENAP), launched in June 2014 at the 67th World Health Assembly, to advance the Global Strategy for Women’s and Children’s Health. The ENAP sets forth a vision of a world that has eliminated preventable newborn deaths and stillbirths. INAP lays out a vision and a plan for India to end preventable newborn deaths, accelerate progress, and scale up high-impact yet cost effective interventions. INAP has a clear vision supported by goals, strategic intervention packages, priority actions, and a monitoring framework. For the first time, INAP also articulates the Government of India’s specific attention on preventing stillbirths. INAP is guided by the principles of Integration, Equity, Gender, Quality of Care, Convergence, Accountability, and Partnerships. It includes six pillars of intervention packages across various stages with specific actions to impact stillbirths and newborn health.

[3] Janani Shishu Suraksha Karyakaram (JSSK): The scheme is estimated to benefit more than 12 million pregnant women who access Government health facilities for their delivery. Moreover it will motivate those who still choose to deliver at their homes to opt for institutional deliveries. It is an initiative with a hope that states would come forward and ensure that benefits under JSSK would reach every needy pregnant woman coming to government institutional facility. All the States and UTs have initiated implementation of the scheme. The following are the Free Entitlements for pregnant women: Free and cashless delivery, Free C-Section, Free drugs and consumables, Free diagnostics, Free diet during stay in the health institutions, Free provision of blood, Exemption from user charges, Free transport from home to health institutions, Free transport between facilities in case of referral, Free drop back from Institutions to home after 48hrs stay. The following are the Free Entitlements for Sick newborns till 30 days after birth. This has now been expanded
**Rashtriya Bal Swasthya Karyakram (RBSK):** Rashtriya Bal Swasthya Karyakram (RBSK) is a new initiative aimed at early identification and early intervention for children from birth to 18 years to cover 4 ‘D’s viz. Defects at birth, Deficiencies, Diseases, Development delays including disability. The launch of this programme assumes great significance as it corresponds to the release of Reproductive, Maternal, Newborn, Child Health and Adolescent Health strategy and also with the Child Survival and Development.

**Rashtriya Kishor Swasthya Karyakram (RKSK):** The Ministry of Health & Family Welfare has launched this programme for adolescents, in the age group of 10-19 years, which would target their nutrition, reproductive health and substance abuse, among other issues. The Rashtriya Kishor Swasthya Karyakram was launched on 7th January, 2014. The key principle of this programme is adolescent participation and leadership, Equity and inclusion, Gender Equity and strategic partnerships with other sectors and stakeholders. The programme aim at enabling all adolescents in India to realize their full potential by making informed and responsible decisions related to their health and well being and by accessing the services and support they need to do so. The Rashtriya Kishor Swasthya Karyakram (National Adolescent Health Programme) will comprehensively address the health needs of the 243 million adolescents. It introduces community-based interventions through peer educators, and is underpinned by collaborations with other ministries and state governments. Objectives: Improve Nutrition, Improve Sexual and Reproductive Health, Enhance Mental Health, Prevent Injuries and violence, Prevent substance misuse.  

**Reproductive, Maternal, Newborn, Child and Adolescent Health:** RMNCH+A launched in 2013 it essentially looks to address the major causes of mortality among women and children as well as the delays in accessing and utilizing health care and services. The RMNCH+A strategic approach has been developed to provide an understanding of ‘continuum of care’ to ensure equal focus on various life stages. Priority interventions for each thematic area have been included in this to ensure that the linkages between them are contextualized to the same and consecutive life stage. It also introduces new initiatives like the use of Score Card to track the performance, National Iron + Initiative to address the issue of anemia across all age groups and the Comprehensive Screening and Early interventions for defects at birth, diseases and deficiencies among children and adolescents. The RMNCH+A appropriately directs the States to focus their efforts on the most vulnerable population and disadvantaged groups in the country. It also emphasizes on the need to reinforce efforts in those poor performing districts that have already been identified as the high focus districts. Objectives: The 12th Five Year Plan has defined the national health outcomes and the three goals that are relevant to RMNCH+A strategic approach as follows:

- **Health Outcome Goals established in the 12th Five Year Plan:**
  - Reduction of Infant Mortality Rate (IMR) to 25 per 1,000 live births by 2017
  - Reduction in Maternal Mortality Ratio (MMR) to 100 per 100,000 live births by 2017
  - Reduction in Total Fertility Rate (TFR) to 2.1 by 2017

**Mother and Child Tracking System:** Government has developed The Mother and Child Tracking System. When a mother dies, children lose their primary caregiver, communities are denied her paid and unpaid labour and countries forego her contributions to economic and social development. A woman’s death is more than a personal tragedy it represents an enormous cost to her nation, her community, and her family. Any social and economic investment that has been made in her life is lost. More than a decade of research has shown that small and affordable measures can significantly, reduce the health risks that women face when they become pregnant. Most maternal deaths could be prevented if women had access to appropriate health care during pregnancy, childbirth, and immediately afterwards.

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The India has seen a consistent decline in Infant Mortality Rate (IMR) and Under-Five Mortality Rate (USMR) over the years. Though the rate of decline has progressively increased over decades, but the country is unlikely to meet the Millennium Development Goal (MDG)-4 target of reducing by two thirds the under-five mortality rate from the baseline level of 1990. The deadline for meeting the target ends in December 2015.

India continues to lose thousands of children below the age of 5 years everyday – ranking fifth globally in child mortality but in terms of numbers the figure is a whopping 14 lakh which is the highest number in the world. This figure is unacceptable by all standards for a country whose economy is poised to grow at 7 per cent annually. Even more painful is the fact that more than half of these children die within 28 days of their birth, and of causes which are preventable. India’s smaller and lesser developed neighbours like Bangladesh and until recently Sri Lanka are way ahead in preventing infant and maternal deaths. Even China with almost the same reproductive and child health indices as India until some decades ago has marched ahead.

Sensitive Indicator

Child mortality is a sensitive indicator of the country’s socio-economic development. Infant Mortality Rate (IMR) and Under-5 Mortality Rate (USMR) are the two important components of child mortality with the latter indicating the risk of death to the child within the first year of his life which broadly also means unmet health needs and unfavourable environmental factors during birth while the USMR rate is an indicator of exposure to the risk of death the child within the first five years of life and, an accepted global indicator of health and socio-economic indicator of a given population. It is also used to assess the impact of various interventions at improving child survival.

The leading causes of infant mortality are asphyxia, pneumonia, pre-term birth complications, diarrhoea, malaria, measles and malnutrition. Many socio-economic factors also contribute to infant
mortality such as mother’s level of education, environmental conditions like accessibility to facilities, and political and medical infrastructure. Improving sanitation, access to clean drinking water, immunization against infectious diseases and other public health measures help in reducing infant mortality.

Effective care at the time around childbirth, and the first days after birth has the highest effect on stillbirth, newborn, and maternal mortality.

**Prevention**

Complications during labour and delivery contribute to approximately one quarter of all neonatal deaths worldwide. Many of these complications are easily preventable. What is needed is universal implementation of the full package of labour and delivery interventions, starting with skilled attendance at birth.

Sepsis, asphyxia and lack of skilled assistance need to be addressed at the time of delivery. It is imperative that government develops and implements schemes which encourage institutional deliveries closer home at Community or Primary Health Centres. This would, in turn, reduce the burden on district hospitals many of which are unable to handle a huge rush of institutional deliveries who end up there because the CHCs are not equipped and PHCs are not even functional. Certainly, easier said than done because it requires lot of political commitment, funding and ensuring these systems are equipped and functional.

Some other causes of congenital infant mortality are malformations, sudden infant death syndrome, maternal complications during pregnancy, and accidents and unintentional injuries. Environmental and social barriers prevent access to basic medical resources and thus contribute to an increasing infant mortality rate particularly so in a developing country like India where social inequalities are stark and the rural-urban divide sharp.

**The Picture Today**

Going by the MDG-4 targets, India was to reduce the IMR to 28 per 1,000 live births and U5MR to 42 per 1,000 live births by the end of this year. As things stand today, only six States—Tamil Nadu, Kerala, Maharashtra, West Bengal, Punjab and Himachal Pradesh—have met the target of reducing IMR to below 28. Big States like Rajasthan, Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh and Assam have 50 per cent of the country’s population, 60 per cent of births, 71 per cent of infant deaths, 72 per cent of under 5 deaths and 62 per cent of maternal deaths. These put together pull down the national average to 40 making it difficult to achieve the target.

The focus of the successive governments so far has been on reducing infant and under-5 mortality. It was not long back that government started paying attention to neonatal mortality or the first 28 days of the child—a period during which 50 per cent of infant deaths occur.

“About 0.76 million neonates die every year in India, the highest for any country in the world. The neonatal mortality rate (NMR) of the country did decline from 52 per 1000 live births in 1990 to 29 per 1000 live births in 2012 (SRS 2012) but the rate of decline has been slow, and lags behind that of infant and under-five child mortality rates. The slower decline has led to increasing contribution of neonatal mortality to infant mortality,” according to a report of the Save the Children, a non-governmental organization.

**More Resources**

In recent years, India has stepped up financial resources for health, strengthened health systems and focused on reproductive and child health while prioritising rural, marginal and vulnerable populations. There has been a paradigm shift from reproductive and child health to reproductive, maternal, newborn child health and adolescent approach which includes emphasis on spacing through door step delivery of contraceptives, intra-uterine device contraceptives services and sub centres and post delivery family planning services, in addition to ante and post natal care.

However, despite these achievements, a lot more needs to be done. There are huge discrepancies among and within the States. Social barriers to access, lack of infrastructure and manpower in the rural
and far flung areas and urban slums are situations which need to be addressed urgently. Informing the people about the schemes and their entitlements is as important because there appears to be huge gap on front as well. Neither information nor schemes reach those who need them the most.

Citing the National Family and Health Survey-3, “Infant and Child Mortality—Levels, Trends and Determinants” a comprehensive analysis of child mortality brought out jointly by UNICEF, National Institute of Medical Statistics and Indian Council of Medical Research, has revealed that neonatal mortality is lowest for children delivered at home by health professionals (19.8/1000 live births) and was highest for children delivered at home by traditional birth attendants (27.2/1000 live births). Mortality among those delivered in a hospital was in between the two (25.2/1000 live births).

The risk is even higher for children born in scheduled tribe (ST) families as compared to scheduled caste (SC). For example, a child born to an SC family has 13 per cent higher risk of dying in the neonatal period and 18 per cent higher risk of dying in the post-neonatal period, as compared to others. Similarly, a child born to an ST family has 19 per cent higher risk of dying in the neonatal period and 45 per cent risk of dying in the post-neonatal period.

Similarly, IMR and U5 mortality rates are consistently lower among children living in families who accessed drinking water from a safe source as compared to those who accessed drinking water from an unsafe source, and among children living in families with access to an improved toilet as compared to those who do not have such an access.

The government has identified 284 high priority districts, based on composite health index across States and announced 30 per cent higher allocations, better infrastructure and incentives for human resources to bring these at par with the rest. There are 100 IMR districts and 25 MMR administrative divisions which are common among worst performing in infant and maternal mortality. These include 42 hotspot districts spread across Uttar Pradesh (28), Madhya Pradesh (10) and Assam (1).

Decline in 230 Districts

According to the Annual Health Survey (2012-13) conducted in 284 districts of Empowered Action Group (EAG) or States which have poor health indicators, Shrawasti district in Uttar Pradesh recorded the highest Infant Mortality Rate of close to 100 while three districts of Uttarakhand (once part of UP) Almora, Pithoragarh ad Rudraprayag recorded a comparatively low IMR of 20. The AHS is conducted in Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan, besides Assam and monitors the progress on reproductive and child health every year. As compared to the baseline, the IMR declined in 230 districts) and remained the same in 30 (10.6 per cent) districts. A total of 248 (87.3 per cent) districts have an IMR of 45 or more. For the Neo-Natal Mortality rate (NNMR), it declined in 186 districts and remained same in 55 districts while U5MR declined in 249 districts and remained unchanged in 10.

Experts say in addition to the measures like Janani Suraksha Yojana which offers monetary incentive for institutional deliveries, Janani Shishu Suraksha Karyakram which offers free treatment to mother and child for one month, and other programmes like tracking mother and child and the government’s focus on reproductive and child health which includes adolescent health, the Swachh Bharat Campaign would significantly improve the survival of children in the country. However, there is an immediate need to propagate basic healthy practices relating to institutional deliveries (still not 100 per cent), breast feeding (less than 60 per cent) and immunization (just about 80 per cent), personal hygiene and sanitation. Also the large reproductive population of 2.6 crore remains bereft of care during the critical phases of pregnancy and post-delivery which needs to be taken into account. Here, government needs to consider a large migrant population from rural regions which comes into bigger cities for better livelihood prospects but often end up in slums where there are no facilities for healthcare, sanitation and pure drinking water. The National Health Mission, which combines the National Rural Health Mission and the National Urban Health Mission, promises to do just that. But how effectively it will be done will have to be seen considering that
government facilities even in the best of situations fall below expectations in service delivery.

``Government needs to prioritise strategies to address the early neonatal mortality within the broad frame work of maternal-neonatal health programme and improve the quality of care in health facilities in labour and delivery, and in the immediate postnatal period,’’ recommends State of the World Children 2014 report of the Save the Children. There is a need to improve detection, referral and treatment of sepsis and pneumonia in the postnatal period and eliminate inequities in NMR between and within states by decentralized district level strategies and action, the report suggests.

Single Digit By 2030

On its part the government has shown commitment to reduce infant mortality by focusing on preventing neonatal deaths. It has launched a programme to reduce number of neonatal deaths to a single digit by 2030 from the current 29 deaths per 1,000 live births. The ‘India Newborn Action Plan (INAP),’ can reduce the deaths through “simple, cost-effective interventions” before and immediately after delivery, the officials explain. Of the close to 14 lakh children under the age of five years die in India and 7.56 lakh of them in their first month.

The programme will be implemented under the existing Reproductive, Maternal, Child Health and Adolescents Plus (RMNCHA+) framework. The government has also already put in place the sick newborn care units in over 500 hospitals and has been successful in providing free transportation to pregnant and lactating mothers for delivery and back home. The Accredited Social Health Activists, trained as frontline workers under the National Rural Health Mission (NRHM) launched in 2005, have played a significant role in improving the reproductive and child health indicators despite prevalent corruption, bureaucratic red-tapism and stiff resistance to change the traditional mindsets and breaking caste and class barriers.

Coping

It cannot be business as usual an officer of the Ministry of Health and Family Welfare explained. Each State will have to identify a specific goal to meet the target. These could be enhanced coverage of health and nutrition, water, sanitation and hygiene which can prevent pneumonia and diarrhoea. Here, mother’s education plays an important role. Children born to women with an educational level of Class VIII or higher have a lower risk of dying because the mother is likely to have married at an older age, used contraceptives and her children would be better spaced and, hence, healthier.

In addition to focusing attention to addressing disparities within States and among regions, there is an inevitable need to bring health and child services under universal health coverage with a focus on special requirements of vulnerable, hardest-to-reach populations and marginalised groups. Inexpensive lifesaving treatments remain inaccessible to a vast majority of Indian children, as do free contraceptives for the couples who may not want to have children, especially those in the poorest groups within the country. All these challenges can only be met by State intervention and by better implementation of scheme meant for the benefit of the people.

(The author is a senior journalist based in Delhi)
NATIONAL PHArmACEutICAL PrICINg AuTHORITy AND Drug PrICe CONTrOl IN INDIA

Injeti Srinivas

National Pharmaceutical Pricing Authority (NPPA) was established in 1997 as an independent body responsible for price control of essential and life saving drugs. Its other responsibilities include review and updation of the list of drugs under price control; monitoring of price compliance by pharmaceutical companies, distributors and retailers; recovery of overcharged amount along with interest from defaulting companies; monitoring of price movement with respect to non-scheduled drugs, which are not under price control; monitoring and ensuring the availability of essential and lifesaving drugs; undertaking/ sponsoring research studies with respect to drug pricing and related issues; and rendering advice to the Central Government on the pricing and availability of essential and lifesaving drugs. In short, NPPA is tasked with the responsibility of implementing the Drugs (Prices Control) Order (DPCO). And in doing so, NPPA it maintains close coordination with the Ministries concerned, State Governments, Industry, Trade and Consumer organizations.

The Indian Pharmaceutical Industry: is the third largest in the world in terms of volume (accounting for approximately 10% of global production) and tenth largest in value, which is growing at 12-15% CAGR. The size of the Indian pharmaceutical industry is currently estimated at US$ 30 billion, roughly half of which is accounted for by the domestic market, and the remaining half, by the export market. The turnover is expected to touch US$ 55 billion by 2020. The India pharmaceutical industry has over 10,000 companies, but is dominated by a few. Before 1970, multinational companies dominated it, but now the big Indian pharma companies dominate the sector.

Pharmaceutical Price Control across the World: is marked with direct price control and/ or indirect price control. Barring a few countries such as the USA and some South American countries, drug price control is a universal feature throughout the world. Twelve out of sixteen West European countries exercise direct price control and the remaining indirect. Most Central and East European countries use reference pricing system and therapeutic comparators. Australia and New Zealand follow formulary-based drug price control system. China sets prices based on control of profits and sales margins. Canada has Patented Medicines Prices Review Board and also reference pricing. In many countries, drug pricing is linked with their national health system, reimbursement schemes, and health insurance schemes.

Drugs Price Control in India: was first introduced in the aftermath of Chinese aggression in 1962 by promulgating the Drugs (Prices Control)
Order (DPCO), 1963 under the Defence of India Act. Thereafter a number of DPCOs were promulgated (1966, 1970, 1979, 1987 and 1995) under the Essential Commodities Act, 1955. The latest Drugs (Prices Control) Order was notified in 2013. DPCO 2013, which is based on the National Pharmaceutical Pricing Policy 2012, and marks the watershed in our approach to drug price control in the country. It makes a departure from DPCO 1995 in three ways – first, it adopts market based pricing in place of cost based pricing; second, it looks at specific formulations based on active pharmaceutical ingredient (API), dosage form and strength for the purpose of price control instead of applying price control to both the bulk drug or API and its formulations; and third, it adopts the National List of Essential Medicines (NLEM) 2011 as the primary basis of determining essentiality.

Control of drug formulation prices: The NLEM 2011 comprises 680 formulations, which reduces to 628 if we discount formulations that appear in more than one therapeutic group. Out 628, so far 521 scheduled formulations have been brought under price control. Around a 100 formulations have been left out due to lack of movement in the retail market; these are accounted for mainly by institutional sales. During the last one year, 256 formulations (including scheduled drugs, new drugs and others) have been brought under price control resulting in a financial relief of nearly Rs 600 crore to the consumer. At present, the span of price control with respect to scheduled drugs is around 15% of the domestic moving annual turnover (MAT), which is around Rs. 82,000 crore. Drug price control is essential for making healthcare affordable, as drugs account for 80 per cent of private healthcare expenditure. This is primarily due to the limited outreach of government schemes. The National Health Mission as well as central and state health insurance schemes are essentially focused on in-patient healthcare. Out-patient healthcare cost is still largely met by the patients themselves by way of out-of-pocket expenses. Many studies show a positive correlation between health expenditure and impoverishment, particularly in rural India. Government of India is planning to promote generic medicine in a big way through a renewed Jan Aushadi programme.

Health Coverage and Disease burden: the total healthcare expenditure in India as a percentage of GDP is 4.1% as compared to a global average of 5 to 6%. Further, the Government share is only 1.04% (Central Government, 0.34%; and State Governments, 0.70%), which translates to a per capita expenditure of Rs. 325 per annum by the Central Government and Rs. 632 per annum by all State Governments put together. The Government expenditure on healthcare needs to go up substantially if we are to ensure affordable healthcare for all, including affordability of medicines. Currently, national programmes provide universal coverage for less than 10 per cent of all mortalities and 15 per cent of all morbidities; further 75 per cent of communicable diseases are not part of national health programmes whereas the share of non-communicable diseases in the overall disease burden is currently around 40 per cent.

Database on Drug production, Imports, Availability, Sales and Prices: until recently NPPA did not have its own database on drug production, imports, availability, sales and prices. It was totally dependent upon the IMS Health database and Pharmatrac (both private sources) for drug sale and price data, which was a serious limitation, as these are based on sampling, and not fully validated. NPPA with the help of National Informatics Centre (NIC) has now developed an online system to capture data from the manufacturers directly, which is called Pharma Prices Data Bank (PPDB). PPDM will enable capturing of this information online and subsequent data analysis, which will help NPPA to effectively discharge its functions. It will also be beneficial to pharmaceutical companies and consumers, as the former will have access to a hassle-free reporting system while the latter will get access to comprehensive price data for taking informed decisions with respect to cost effective treatment.

Market based pricing: the ceiling prices of scheduled drugs are fixed on the basis of simple average price of all brands of a formulation that have a market share of 1 per cent and above; if a company sells a particular formulation in more than one brand name, the aggregate share of all those brands is taken into account for the purpose of determining its market share. Sixteen (16) per cent is added to the simple average price, towards retailers’ margin, in order to arrive at the Ceiling Price. Those brands selling above the ceiling price are required to bring it down to the ceiling price, but those below it are required to retain the price at the existing level. The maximum retail price (MRP) is arrived at by adding local taxes to the Ceiling Price.

Implementation of Prices notified by NPPA: the price notified by NPPA comes into effect immediately from the date of notification. In other words, any batch produced after that date must contain the revised MRP. As regards the existing stock in the market which
contains the pre-revised MRP, the manufacturer has
to ensure that it is recalled and re-released into the
market after reprinting the new MRP. As such, at any
point in time, the consumer should get the medicine
at the current notified price or printed price whichever
is lower. For this to be implemented effectively, the
enforcement of reporting and display requirements
must be strictly enforced.

**Annual Price increase:** Annual price increase is
allowed both in respect of scheduled drugs and non-
scheduled drugs. With respect to scheduled drugs,
anual price increase on the MRP is allowed up to the
wholesale price index (WPI) percentage of the previous
year, as notified by the Department of Industrial Policy
& Promotion, subject to the company notifying the
same to the National Pharmaceutical Pricing Authority
(NPPA). If the WPI is negative, the prices are required
to be brought down to that extent. In the case of non-
scheduled drugs, annual price increase on MRP not
exceeding 10 per cent is allowed.

**Monitoring the availability of Scheduled formulations:** The NPPA is responsible for monitoring
the availability of scheduled formulations and APIs contained in scheduled formulations. All
manufacturers of scheduled formulations and the APIs used in scheduled formulations are required
to submit quarterly reports to the NPPA on their production, import and sale of scheduled/ NLEM
drug(s) in a prescribed form. Any manufacturer of a
scheduled formulation, intending to discontinue its
production has to issue public notice, at least six (6)
months in advance, and also seek permission of the
NPPA explaining the reasons for doing so. The NPPA
follows transparent guidelines for this purpose.

**Market Concentration:** even though there are
over 10,000 pharmaceutical manufacturers in the
country, there exists high market concentration.
Top 100 companies account for around 96% of
the MAT. The role played by the small scale units is
largely confined to production of unbranded generic
medicine and contract manufacturing of branded-
generics for medium and large manufacturers. As per
a study of 2014, in 94% of scheduled formulations for
which Ceiling Price has been fixed the market leader
enjoyed a market share of over 25 per cent; and in
67 per cent greater than 50 per cent. In many cases
the market leader is also the price leader. All these
facts point to the market imperfections existing in the
pharmaceutical sector in the country.

**New Drugs:** any existing manufacturer of a
scheduled drug who launches a new drug by combining
it with another scheduled or non-scheduled drug; or
by changing the dosage or strength or both of the
scheduled drug, has to seek prior price approval
from the NPPA before launching the new drug in
the market. Price fixation of a new drug is done by
obtaining simple average price of existing brands or
proposed price, whichever is lower, in case the new
drug is already available in the market; or on the basis
of pharmacoeconomics study by an expert group, in
case the drug is not yet available in the market.

**Fixed Drug Combinations:** most of the new drugs
in India are fixed drug combinations (FDCs), which
involve a combination of two or more APIs. As a result,
to be are too many FDC here as compared to most
other countries. Further, very often their therapeutic
value is not properly demonstrated before launch.
Recently, the Ministry of Health & Family Welfare
and the Drug Controller General of India (DCGI) have
issued guidelines to all State Drug Controllers (SDCs)
on grant of manufacturing license in respect of FDCs.
As per law, the central licensing authority (CLA) alone
is competent to issue manufacturing license for a new
drug, and only after the drug is four years old, can the
State Licensing Authority (SLA) grant a license under
the Drugs & Cosmetics Act, 1940. But this appears to
have been violated by some SDCs. A central committee
has been set up to review FDCs in the country and
weed out irrational FDCs.

**Exemption from Price Control:** patented drugs,
both process or product, developed through indigenous
R&D, and novel drugs with new delivery system
developed through indigenous R&D are exempted
from price control for a period of 5 years from the date
of commencement of commercial production. The
manufacturer has to obtain a specific exemption in this
regard from the NPPA for this purpose.

**Monitoring the Prices of Non-Scheduled Drugs:**
the NPPA monitors the prices of non-scheduled drugs
as well to keep them at a reasonable level. Although
non-scheduled drugs do not fall under direct price
control, their price cannot increase beyond 10 per
cent annually (MRP to MRP).

**Display of Prices of Scheduled & Non-Scheduled formulations:** the DPCO 2013 has specific provisions
requiring every drug manufacturer to display the MRP
on the pack and to issue price list to the dealers, SDCs
and NPPA. Similarly, every retailer too has to display
medicine prices at a conspicuous place. Separately,
NPPA is making efforts to introduce a distinguishing
mark for scheduled/ NLEM drugs so that the consumer
can easily differentiate a NLEM drug which is both
efficacious and economical.
**Generation of Public Awareness:** The information asymmetry between a doctor and a patient is very high in India. This is largely attributed to factors such as a lack of standard treatment guidelines; misuse of labeling requirements by pharmaceutical companies; and supplier-induced demand for drugs (by influencing doctors). The NPPA in collaboration with the Department of Consumer Affairs runs a campaign to educate and empower patients in taking informed decisions about cost-effective treatment.

**Generic-Generic versus Branded-Generics:** A generic drug is pharmaceutically and therapeutically equivalent to a brand-name drug, which means it works like the brand-name drug in dosage, strength, performance, and use; and meets the same quality and safety standards as the brand-name drug. Generic drugs cost only a fraction of a brand-name drug because there is no cost of discovery (being a copied medicine) and also due to intense competition. Most countries take effective steps to promote generic drugs because they are both cost-effective and clinically effective. In the US, for example, where there is no price control, generic drugs have significantly brought down the expenditure on drugs. In 2013, the total expenditure on drugs in the US was around US$ 325 billion (per capita spend of around US$ 1,000 per annum). 84 per cent of medicines consumed were generic and only 16 per cent were brand-name or patented drugs. Generic drugs accounted for only 28 per cent of the value whereas for brand-name drugs accounted for 72 per cent of the value. In many countries the average annual growth in pharmaceutical expenditure in real terms has fallen due to generic competition. In India, the share of unbranded-generic drugs is insignificant. But the new Jan Aushadhi drive is expected to become a game changer by mainstreaming generic drugs, which will make medicines very affordable.

**Promotion of Generic Drugs:** A number of measures are required to promote generic medicines. First, there is a need for a supportive legislation that make prescriptions in generic name mandatory, provides legal basis for generic substitution by pharmacists, and prescribes strict labeling requirements for drugs. Second, the quality assurance capacity must be enhanced by improving drug quality testing capability and drug outlet inspection capability. Third, building professional and public acceptance with respect to generic drugs. Fourth, information dissemination on drug prices must be ensured. And fifth, use of economic tools such as reference pricing and reimbursement policies, retail price controls, and incentives to drug industry to produce generic medicines should be encouraged.

**Overcharging:** is applied whenever a drugs sold above the notified price/ permissible price. The overcharged amount is recovered with interest. In case of a new drug where specific prior price approval is given by the NPPA, there is also a provision to charge penalty (over and above the overcharged amount and interest). Over a thousand overcharging cases have been registered under DPCO 1995 and 2013, since inception, with a total demand close to Rs. 4,000 crore, out of which, hardly 10% has been recovered so far and the rest is under litigation. During the last financial year, nearly Rs. 100 crore was recovered.

**Paragraph 19:** Para 19 of the DPCO 2013 allows NPPA to fix/ revise Ceiling Price/ MRP of any drug in extraordinary circumstances, if it considers doing so necessary in public interest. NPPA invoked this provision and capped the MRP in respect of 108 formulations relating to Diabetes and Cardiovascular therapeutic groups in July 2014. NPPA intervened in these two therapeutic groups because of their huge incidence. Today, more than 60 million people in the country suffer from Diabetes and it causes more than a million deaths every year. Similarly, around 10 per cent of the population suffers from CVD ailments, and 25 percent of deaths in the age group of 25-69 are caused by it. The total financial relief is estimated at approximately Rs. 350 crore.

**Medical devices:** the Ministry of Health & Family Welfare has notified 22 medical devices as drugs under the Drugs and Cosmetics Act, 1940. At present, except for family planning devices, the rest are not under price control. The need to bring medical devices such as cardiac Stents and orthopedic implants under price control is under active consideration.

**Institutional Sales:** some expensive drugs are not available in the retail market, and are sold directly to hospitals and nursing homes. It is generally observed that these drugs are sold to hospitals/ nursing homes at huge discount/ rebate, which are seldom passed on to the consumer. This is one area that requires urgent attention to prevent exploitation of hapless patients.

**Conclusion:** The NPPA as an independent drug price regulator plays an important role in ensuring affordability and availability of essential and lifesaving medicines for all.

*(The author is holding dual charge of Chairman, National Pharmaceutical Pricing Authority and Director General, Sports Authority of India. He has been contributing articles to major national newspapers and journals)*
Exploring the complexities of health related issues of tribal in India is possible by understanding the definitions and concepts available in Social Science literature. Most probably the term is derived from “Tribus” (Latin) which means “a group of persons forming a community, claiming descent from a common ancestor.” It might have originated in the City States of ancient Greece and Roman empire. Redcliff Brown defines a tribe as having a distinct name which does not blur with the boundary of its neighbours, a language and defined territory.

Health Care Initiatives

Five year plans since independence have a major health component for the tribes with huge fund allocations for human resource and infrastructure development. Comprehensive measures have been initiated for sanitation, water purification, communication and education. Primary Health Centres are instituted for every 20,000 persons in tribal areas. Sub-centres are available for 3,000 population. Both central and state governments have implemented programmes for preventive and curative health services. Along with mobile health services, doctors and paramedics are appointed to provide health care. One ANM (Auxiliary Nurse Midwife) is appointed for 15-20 scattered villages. AYUSH (Ayurveda, Yoga, Unani-Tibb, Siddha and Homeopathy) has scaled down medical expenses. To check maternal and infant mortality specific attention is given through the National Rural Health Mission. Apart from government, non-governmental organizations are providing health care services in remote tribal areas. Now quite a few corporate houses have included health programmes in the CSR (Corporate Social Responsibility).

Despite several initiatives and interventions by the government health status indicators for the
Endemic diseases like malaria continue to affect people despite the special malaria control programme. Diarrhea, tuberculosis, chicken pox, meningitis and other vector, air, waterborne diseases have not abated. Morbidity and mortality rates are high due to malnutrition and anemia. Reportedly tribal people are also suffering from lifestyle diseases like diabetes and hypertension. Some important reasons for suboptimal health status of tribal people are as follows.

Culture

Majority of the tribes living in remote areas have no awareness about health as a prerequisite for human development. Much of this can be attributed to their culture, a cumulative deposit of knowledge transferred from generation to generation which are intrinsic to their social existence. Their way of thinking is considered right and one such mode is belief in the supernatural with manifestations as good and evil. Fear of the evil spirit is embedded in their belief system so much so that diseases are attributed to its wrath which can cause immense misery. Such evil spirit is believed to be residing in any natural space and punish a person with disease and death. The quacks are presumed to have control over such spirit and manipulate its power to cause physical harm. Diseases are believed to be cured by propitiating the spirit through rituals as per convention. Therefore, health related problems are not referred to service providers trained in modern methods of treatment.

Economic Constraints

Apart from rigid cultural imperatives, an important reason is economic. Mostly they have subsistence economy which is characterized by simple technology, simple division of labour, small scale units of production like weaving, pottery and no investment of capital. Their knowledge about farming is primarily based on experience some of which have been carried over through successive generations. Due to small land holdings and crude methods of cultivation yield from land is meager. Therefore, they supplement it with wages earned from working as labourers. Availing health services, medicine and surgery etc. is expensive which they are unable to afford with their meager income. Primary health centres located in some villages do provide health care for free but limit it to some common and virulent diseases. Complicated cases are referred to better equipped hospitals where services are expensive. Sometimes people mortgage or sell their assets to meet the expenses but those without assets succumb to the disease. Many become physically and mentally invalid. For such persons life becomes unbearable as they lose their income, become dependents without hope of care and help from the family and community.

Lack of Awareness

Lack of awareness is a major determinant of their poor health status. Poor literacy adds to this problem. Boys and girls are engaged in labour quite early in life while girls share the added responsibility of care services at home in the absence of parents. Most of the girls are married after attaining puberty and beget children at a tender age. Inexperienced motherhood is a bane for the child and mother which is the main reason for higher rate of maternal and child mortality. Post natal care is worse as women after delivery do not get adequate rest which harms health of the mother as well as the child. An important neglected area is reproductive health. Married women do not have control over their reproductive health. They are not free to decide about safe sex and gap in child bearing.

Many women are handicapped visually, hearing impaired and suffer from gynecological disorder, goiter, pyrexia, respiratory problem, gastro-intestinal diseases, rheumatism, water and air borne diseases. Heavy physical labour and lack of nutrition result in anemia which lowers their resistance to diseases. Frequency of pregnancy and maternal malnutrition affect the health of mother as well as the child. The child is breast fed till it takes solid food and even thereafter. Lactation is affected due to improper nutritious. Large scale felling of trees for construction of roads and other infrastructure, distance between the village and forest has increased. As a result women have to walk longer distances to collect forest products including herbal medicine. Lack of time, physical stamina, economic and domestic constraints restrain them to walk long distances. Quite often women prefer to be hungry rather than moving out.
to the forest for collecting forest products if other family members have been fed thereby increasing vulnerability to diseases.

Women in most tribal groups in order to avoid pregnancy follow crude methods of abortion which affects their health sometimes leading to death. Expectant mothers are not inoculated against tetanus. As they walk barefoot in muddy roads the chances of tetanus is high. Neither do they take vitamins, minerals and nutritious food. Deliveries are done at home even though primary health service providers explain them about danger involved in crude method of delivery. Complicated cases are referred to the nearby hospital but by that time the woman loses the chance to survive. Maternal mortality is also due to unhygienic and primitive practices of parturition.

**Unhygienic Environment**

Poor sanitation is a major reason adversely affecting health. Even though in most of the tribal areas water is sanitized yet the supply is not regular, defunct piped water sources are not repaired on time and people are unaware of benefits of clean water. The environment is polluted due to defecation and waste disposal in the open, lack of drainage, burning forest for reclaiming land for cultivation, use of firewood for cooking, felling of trees for personal use etc. Firewood and cow dung cake is used for cooking. Their houses lack in ventilation due to which the smoke is not released properly affecting vision and respiration. Many do not have clean habits like regular bath and mouth wash. Cattle shed in most of the houses are proximate to the main living room which breeds insects and flies. Sometimes vector borne diseases are pandemic but people believe it to be wrath of evil spirit.

**Nutritional Deprivation**

Hard physical labour and lack of nutrition result in anemia depleting their resistance to diseases. NFHS survey data reveals unhealthy dietary habits are linked to disease and mortality. A plethora of reasons can be attributed to poor nutrition. It is economic as their meager income is inadequate to provide sufficient nutritious food required for a healthy life. Seasonal fruits and vegetables are consumed without assessing its nutritional value. Protein intake is mostly fish. Smoking, tobacco chewing and drinking are common. Alcohol consumption has strong relation with morbidity and mortality. Displaced tribals depend on government subsidies with no other income to supplement the cereals available under the Public Distribution System. Most of the tribals are not settled agriculturists who survive on meat and fruits available in the forest. With depleting forest resources their food intake is severely affected. Policies of conservation too have limited their option to collect forest products essential for their survival.

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**PM reviews progress of tribal welfare programmes**

The Prime Minister, Shri Narendra Modi has called for enhanced convergence among various schemes aimed at welfare of tribal communities across the country. Chairing a high-level review meeting on tribal welfare initiatives including Vanbandhu Kalyan Yojana, the Prime Minister stressed on improving the outcomes of various interventions for tribal welfare. The Prime Minister said various wings of the Government of India, and the States, should work in coordination to meet the targeted objectives within specified timeframes.

The Prime Minister enquired about the progress in mapping of sickle cell anaemia among the tribal population. He also sought to know the impact of the Jan Dhan Yojana and recently launched social security schemes, on the tribal communities. He reiterated his earlier suggestion about exploring the possibility of a Tribal Cultural Troupe Carnival.
Health is a prerequisite for human development and is an essential component for the wellbeing of the mankind. The common beliefs, customs, practices related to health and disease in turn influence the health of the human beings. Health can be regarded as a state of mental, social and economic wellbeing and not the mere absence of dis-ease. Health is a function, not only of medical care, but also of the overall integrated development of society - cultural, economic, educational, social and political. Therefore to have sound health, the other depending factors are also to be looked into.

Despite remarkable world-wide progress in the field of diagnostics and curative and preventive health, still there are people living in isolation in natural and unpolluted surroundings far away from civilization with their traditional values, customs, beliefs and myth intact. They are commonly known as “tribals”. It is fascinating that tribals in India constitute 104.28 million, as per 2011 census, which is about 8.61% of the total population of India. There are some communities among tribals who have been designated as ‘primitive’ based on pre-agricultural level of technology, low level of literacy, stagnant or diminishing population size, relative seclusion (isolation) from the main stream of population, economic and educational backwardness, extreme poverty, dwelling in remote inaccessible hilly terrains, maintenance of constant touch with the natural environment, and unaffected by the developmental process undergoing in India. If general health of an average non-tribal Indian is inferior to the Western and even many Asian counterparts, the health of an average Indian tribal is found to be much poorer compared to the non-tribal counterpart. The health status of tribal populations is very poor and worst of primitive tribes because of their isolation, remoteness and being largely unaffected by the developmental process going on in India.

Tribal Health Culture

The culture of community determines the health behaviour of the community in general...
and individual members in particular. The health behaviour of the individual is closely linked to the way he or she perceives various health problems; what they actually mean to him or her, on the one hand, and on the other his or her access to various relevant institutions. Since the beginning of the civilization, mankind has always been able to find some medicines in the nature. The early healing treatments were derived from the surrounding environment of the human, who were forest dwellers. They made use of plants, animals and other substances naturally available to them to treat illness. Complex health care system of the simple societies evolved based on deep observation of the nature and environment.

The medical system in simple societies is structured on the lines of herbal and psychometric treatment. The healing practices include a touch of mysticism, supernatural and magic, resulting specific magic-religious rites etc. Faith healing has always been a part of the traditional treatment in the Tribal Health Care System, which can be equated with rapport or confidence building in the modern treatment procedure. In most of tribal communities, there is folklore associated with health beliefs. The health culture of a community does not change so easily with changes in the access to various health services. Hence, it is required to change the health services to conform to health culture of tribal communities for optimal utilization of health services.

Studies by anthropologists indicate that traditional medicines do exist and persist even though the health consumer has now access to western medicine. There is a need to scientifically study the traditional tribal medicine and healing systems and combine them with modern allopathic system so as to make it available and affordable for the poor tribal population.

Tribal Health Problems

The tribes in India have distinct health problems, mainly governed by multidimensional factors such as habitat, difficult terrains, varied ecological niches, illiteracy, poverty, isolation, superstitions and deforestation. The tribal people in India have their own life styles, food habits, beliefs, traditions and socio-cultural activities. Health and nutritional problems of the vast tribal populations are varied because of bewildering diversity in their socio-economic, cultural and ecological settings.

The health, nutrition and medico-genetic problems of diverse tribal groups have been found to be unique and present a formidable challenge for which appropriate solutions have to be found out by planning and evolving relevant research studies.

Disease burden among the tribals:

The health and nutrition problems of the vast tribal population of India are as varied as the tribal groups themselves who present a bewildering diversity and variety in their socio-economic, socio-cultural and ecological settings. Apart from conventional diseases which occur due to intervention of disease causing agents directly, some other factors also results in ill health among the tribals. The tribal people live in close conjunction to the nature as compared to the non-tribes, hence the adverse effects of climate change is an active as well as a potential threat to them.

Communicable diseases

The people in their daily life consciously or subconsciously modify the environment and ecological aspects of their habitat, which in turn increase the risk for communicable diseases. The communication of diseases is dependent either on the direct contact or on the indirect agents like breathing, sputum, stool, saliva, urine, etc.

There are several communicable diseases prevalent among the tribals of India. These are: Tuberculosis, Hepatitis, Sexually Transmitted Diseases (STDs), Malaria, Filariasis, Diarrhoea and Dysentery, Jaundice, Parasitic infestation, Viral and Fungal infections, Conjunctivitis, Yaws, Scabies, Measles, Leprosy, Cough and Cold, HIV/AIDS, which is spreading like wild fire, etc. due to lack of sanitation and unhygienic living. They frequently become victims of repeated epidemics of the above mentioned contagious diseases. Poor diet and nutrition enhances susceptibility of communication to infectious diseases. Besides, lack of personal and domestic hygiene, overcrowded living are also the causative factors responsible for this kind of diseases. Malaria is emerging as the major public health problem in almost all tribes of India. Local outbreaks due to malaria are of frequent occurrence, and the morbidity and mortality associated with the disease is alarming.
Non-communicable diseases

Lack of proper health education, poverty, faulty feeding habits and irrational beliefs aggravate the health and nutritional status of these underprivileged people in India. It is expected that the increase in literacy rate of a community would reduce morbidity and child mortality or in other words, improve the health status of the community as a whole. Tribal diets are generally grossly deficient in calcium, vitamin A, vitamin C, riboflavin and animal protein. Micronutrient deficiency is closely linked with nutritional disorders and diarrhoea. Deficiency of essential dietary components leads to malnutrition, protein calorie deficiency and micronutrient deficiencies (like vit A, iron and iodine deficiency). Vitamin A deficiency in the form of Bitot’s spot, conjunctivalxerosis and night blindness was observed. Alcoholism is another health mishap in the lives of tribals.

Women Health

Women health among tribals is a grossly neglected concept. Almost all tribal women follow unhygienic practices as far their maternal health is concerned. Nutritional anaemia is a major problem for women in India and more so in the rural and tribal belt. This is particularly serious in view of the fact that both rural and tribal women have heavy workload and anaemia has profound effect on psychological and physical health. Maternal malnutrition is quite common among the tribal women especially those who have many pregnancies too closely spaced. Child bearing imposes additional health needs and problems on women - physically, psychologically and socially.

The chief causes of maternal mortality were found to be unhygienic and primitive practices for parturition. Some crude birth practices were found to exist in various tribal groups like Kharias, Gonds, Santals, Kutia Khondhs, Santals, Jaunsaris, Kharias, etc. The habit of taking alcohol during pregnancy has been found to be usual in tribal women and almost all of them are observed to continue their regular activities including hard labour during advanced pregnancy. As far as child care is concerned, both rural and tribal illiterate mothers are observed to breast-feed their babies. But, most of them adopt harmful practices like discarding of colostrum, giving prelacteal feeds, delayed initiation of breast-feeding and delayed introduction of complementary feeds. Vaccination and immunization of Infants and children have been inadequate among tribal groups. In addition, extremes of magic-religious beliefs and taboos tend to aggravate the problems.

Generic Disorders

Hereditary haematological and genetical disorders especially sicklecell disease, G6PD deficiency, haemoglobinopathies and allied haemolytic disorders are important public health problems and occur in high frequencies among different tribal groups and scheduled caste population. These result in a high degree of morbidity and mortality due to haemolysis in vulnerable population. About 13 lakh G-6-P D deficient are present in tribal population. Prevalence rate up to 40 per cent of sickle cell trait has been reported in some tribes i.e. Adiyen, Irula, Paniyan, Gonds.

Sickle cell gene is widely prevalent among the tribal population in India. These have been investigated in over 100 tribal population spread over different parts of the country. The prevalence rate varies widely (0.5 to 45%) among different tribes. Interestingly this gene is restricted amongst the tribes of central, western, southern and eastern India and is conspicuously totally absent in north–east India. There are many primitive tribes who have been identified to be in high-risk group.

Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) are most prevalent disease in the tribal areas. VDRL was found to be positive in 17.12 per cent cases of polyandrous Jaunsaris of Chakrata, Dehradun. Among the Santals of Mayurbhanj district, Orissa, 8.90 per cent cases of VDRL were observed. Likewise in many tribal groups various STDs, RTI (Reproductive tract infections) are observed due to unhealthy practices of sex and other beliefs. The practices of polygamy, polyandry and other such practices resulted in STDs. The prevalence HIV/AIDS is also observed among various tribal groups and is more alarming health concern.
Some initiatives to be taken to reduce tribal health problems

There are several challenges for policy makers, planners, administrators, implementers, doctors, social workers and nongovernmental organizations (NGOs) for the amelioration of tribal communities. Some of the suggestions are listed here for the alleviation of tribal suffering and reduce health problems.

A mass awareness and preventive programme about common prevalent diseases should be launched at weekly markets in tribal areas with increased interaction of Health Workers with the participation of local population.

Mass screening for genetically transmitted diseases such as hemoglobinopathies, b-thalassemia syndrome, G6PD deficiency, haemophilia, colour blindness, etc. should be continued at an interval of certain period for carrier detection among the high risk tribal communities.

A Mini Hospital or Health Unit (including a qualified Doctor, a Laboratory Technician, a Pharmacist and a Staff Nurse with required medicines and laboratory testing set up, etc.) in a Mobile Van should be set up which will cater to the health needs of the tribal community preferably in the weekly tribal market.

Localized research should be directed towards the easily or cheaply available food items, which could provide necessary nutrients with change of dietary practice to the vulnerable families and segments of the society.

Local agricultural produce should be marketed by the tribal cooperative societies rather than individually for the better profit without involving the intermediary agents. Services of anthropologists are indispensable for such monitoring.

Efforts should be made to involve local tribals with economic incentives, traditional dais, traditional healers in the health and family welfare delivery system after giving them proper training. Preventive approach like immunization, anti-infection measures and various other prophylactic aspects should be given more importance.

Managerial skills and controlling power of the doctor to coordinate various activities and maintenance of infrastructures including vehicles and procurement of equipment’s, medicines, vaccines, etc. on regular basis are highly desirable.

An integrated health services would be operated on a teamwork basis by division of labour so that the greatest possible use of professional skills could be made.

Maintenance of registry of common prevalent diseases will be an added advantage for future course of action and effective mobilization of health care machinery of the district, state or the region.

Constraints and bottlenecks of the existing health and family welfare delivery system should be identified, specifying clearly the infrastructure required, strategies to be developed which are in consonance with the felt needs of the local tribal population.

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National Deworming Day

Worms adversely affect crores of children in the 1-19 year age group across the country. Soil Transmitted Helminths (STH) are a significant public health concern in the country. According to WHO estimates, 24.1 crore children in the age group 1-14 year (68% of the total cohort) are at risk of parasitic intestinal worm infections that impair physical growth and cognitive development.

The Ministry observed the first National Deworming Day on 10 February 2015, followed with mop-up activities till 14 February 2015. It was implemented in 277 districts covering 11 States/UTs across 4.7 lakh schools and 3.67 anganwadi centers. Against a target of 10.31 crore children in the 1-19 year group, about 8.98 crore children received deworming tablets. While the average national coverage was more than 85%, it touched 95% in places such as Dadra and Nagar Haveli. The Ministry trained 9.49 lakh frontline functionaries, school teachers and principals to accomplish the target.
The Ministry of Health and Family Welfare, Government of India has launched Mission Indradhanush on 25 December, 2014 as a special nationwide initiative to vaccinate all unvaccinated and partially vaccinated children under the Universal Immunization Programme by 2020.

The Mission focuses on interventions to expand full immunization coverage in India from 65% in 2013 to at least 90% children in the next five years. The programme provides immunization against seven life-threatening diseases (diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis B) in the entire country. In addition, vaccination against Haemophilus influenza type B and Japanese Encephalitis is provided in select districts/states.

This will be done through special catch-up campaigns to rapidly increase full immunization coverage of children by 5% and more annually.

Under Mission Indradhanush, the Health Ministry has identified 201 high focus districts across the country that have the highest number of partially vaccinated and unvaccinated children. Nearly 50% of all unvaccinated or partially vaccinated children are in these 201 districts. Of the 201 districts, 82 districts are concentrated in the four states of Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan and nearly 25% of the unvaccinated or partially vaccinated children of India are in these 82 districts of these four states. These districts will be targeted for intensive efforts to improve the routine immunization coverage in the country. The ultimate goal is to protect all children and pregnant women against vaccine preventable diseases in India.

**Areas Under Focus**

Mission Indradhanush will target 201 high priority districts in the first phase and 297 districts for the second phase in the year 2015. The implementation of the first phase of the Mission in 201 high focus districts will commence from 7th April 2015, World Health Day.

Within the districts, the Mission will focus on the 400,000 high risk settlements identified by the polio eradication programme. These are the pockets with low coverage due to geographic, demographic, ethnic and other operational challenges. Evidence has shown that most of the unvaccinated and partially vaccinated children are concentrated in these areas.
The following areas will be targeted through special immunization campaigns:

- High risk areas identified by the polio eradication programme. These include populations living in areas such as:
  - Urban slums with migration
  - Nomads
  - Brick kilns
  - Construction sites
  - Other migrants (fisherman villages, riverine areas with shifting populations etc.) and
  - Underserved and hard to reach populations (forested and tribal populations etc.)

- Areas with low routine immunization (RI) coverage (pockets with Measles/vaccine preventable disease (VPD) outbreaks).

- Areas with vacant sub-centers: No ANM posted for more than three months.

- Areas with missed Routine Immunisation (RI) sessions: ANMs on long leave and similar reasons

- Small villages, hamlets, dhanis or purbas clubbed with another village for RI sessions and not having independent RI sessions.

### Strategy for Mission Indradhanush

Mission Indradhanush will be a national immunization drive to strengthen the key functional areas of immunization for ensuring high coverage throughout the country with special attention to districts with low immunization coverage.

The broad strategy, based on evidence and best practices, will include four basic elements:

1. **Meticulous planning of campaigns/sessions at all levels:** Ensure revision of microplans in all blocks and urban areas in each district to ensure availability of sufficient vaccinators and all vaccines during routine immunization sessions. Develop special plans to reach the unreached children in more than 400,000 high risk settlements such as urban slums, construction sites, brick kilns, nomadic sites and hard-to-reach areas.

2. **Effective communication and social mobilization efforts:** Generate awareness and demand for immunization services through need-based communication strategies and social mobilization activities to enhance participation of the community in the routine immunization programme through mass media, mid media, interpersonal communication (IPC), school and youth networks and corporates.

3. **Intensive training of the health officials and frontline workers:** Build the capacity of health officials and workers in routine immunization activities for quality immunization services.

4. **Establish accountability framework through task forces:** Enhance involvement and accountability/ownership of the district administrative and health machinery by strengthening the district task forces for immunization in all districts of India and ensuring the use of concurrent session monitoring data to plug the gaps in implementation on a real time basis.

The Ministry of Health and Family Welfare will establish collaboration with other Ministries, ongoing programmes and international partners to promote a coordinated and synergistic approach to improve routine immunization coverage in the country.

### Monitoring of Operational Activities

The Ministry of Health & Family Welfare has put in place a massive framework for rigorous monitoring of one of the largest immunization programmes of the world. The multi-level structure has been carefully designed to supervise and monitor the operations at the state, district and block levels through an army of health experts, officials and various partners.

WHO Country Office for India is collating preparedness status for Mission Indradhanush from 28 states and 201 high focus districts. Critical information on preparedness, including quality of task forces for Immunization, deputation of senior officials to priority areas for monitoring, status of trainings at state, district and block levels and status of microplanning activities is being collated by WHO-NPSP Surveillance Medical Officers and field monitors, and information generated is being shared on a weekly basis with the Ministry of Health and Family Welfare, Government of India on a weekly basis.

A total of more than 225 field Medical Officers, nearly 900 field monitors and more than 1000 external monitors have been deployed by the WHO Country Office for India to monitor the operational components of Mission Indradhanush at session site and at community level. In addition, sub regional and regional team leaders will also be monitoring the implementation besides the national monitors from the WHO Country Office. A standard set of formats for session site monitoring and house to house monitoring have been developed for concurrent monitoring in the field by the monitors, who will also be supported.
by available monitors from partner agencies such as UNICEF and CORE that are already involved with monitoring operational components of routine immunization.

All monitors, including field monitors, external monitors will be deployed by WHO NPSP for duration of at least 8 days (7-14 April). All available monitors including those from partner agencies will undergo a briefing at district level, to be conducted by the Surveillance Medical Officers. The SMO of WHO NPSP will also prepare a monitoring plan for all monitors.

Each monitor will be expected to monitor 4–5 session sites on day 1, and from day 2 onwards, monitor 2–4 sessions per day. In addition, each monitor will conduct house-to-house monitoring from the second day of the Mission Indradhanush drive. House-to-house monitoring will be done only in those areas where immunization sessions have already been held as per microplans during the Mission Indradhanush drive. A monitor should be able to monitor 2–4 areas that have been covered in previous days for house-to-house monitoring. Areas where immunization sessions have been held on the last day of Mission Indradhanush drive will be monitored over the next 1–2 days.

Information generated from concurrent monitoring will be utilized at local level during evening debriefing meetings at block and district level to ensure mid-course corrective actions. Data generated from the monitoring formats will be collated in a data tool to generate key indicators that will be shared at all levels with the Government.

**Communication Monitoring**

To meet and sustain coverage goals under Mission Indradhanush, a well-carved strategic communication plan needs to be in place, reaching out to communities and hard-to-reach populations and building trust in health care services. Multi-pronged communication approach is crucial for the success of the mission. Therefore, it becomes imperative that the communication efforts are monitored closely.

This monitoring system will be used to take immediate corrective action for improvement and for evidence based and focused implementation of communication plan for the Mission Indradhanush. Communication monitoring will measure progress of various IEC/BCC activities at a particular time and at a particular implementation level. UNICEF will be overall in-charge and lead for this IEC/BCC Monitoring, with support of Immunisation Technical Support Unit (ITSU) and other partners.

As per the updated partner monitoring mapping, Lead RMNCH+ partners and UNICEF covers all 201 districts, and together have 1091 staff/consultants for the 1908 blocks under Mission Indradhanush. UNICEF covers 187 districts, 812 blocks in 21 states (15 UNICEF states + 6 North East states). Rest of the districts and blocks are covered by lead partners.

All blocks will be monitored with support of UNICEF in six high priority states (Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, West Bengal and Jharkhand) with maximum number of partially and unimmunized children. To cover all districts and Blocks in these high priority states, UNICEF will be deploying their extra staff from UP & Bihar to other high priority states like Madhya Pradesh and Rajasthan. UNICEF is also hiring additional monitors to monitor MI communication activities in West Bengal.

**There are three formats for monitoring:**

**District level monitoring format**

Monitoring to be done once for Mission Indradhanush drive (preferably on first day of Mission Indradhanush drive)

Aim to measure district preparedness and status of implementation

**PHC/Planning Unit level monitoring format**

Monitoring to be done once for MI drive (preferably on first day of Mission Indradhanush drive)

Aim to measure PHC/ Planning unit level preparedness and status of implementation

**Session site monitoring format**

2-4 sessions for each Mission Indradhanush day

To measure output and outcome of communication activities

Simple excel based data-entry tools (for each format) is also developed for analysis and sharing of data. This analysed data and monitoring feedback will be shared with all the concerned officials for action. It will be shared during evening block meeting and during District Task Force for Immunisation (DTFI) and State Task Force for Immunisation (STFI) for evidence based adjustments to the roll out of the campaign.

UNICEF officials ad partners will ensure entry of all the monitoring data from their districts or blocks in simple excel based data entry tool and send this compiled district excel sheet along with filled monitoring format to Health Specialist, UNICEF at 15 UNICEF state offices and for remaining states data
entry tools and filled formats will be sent to ITSU for compilation and analysis.

The compiled data from all the states will be analysed at UNICEF country office and will be shared with MoHFW.

**National Level Monitoring**

A control room has been established at ITSU for coordinating with State Nodal Officers and National Level Monitors regarding daily reporting of the progress of Mission Indradhanush activities. The control room will also collect, compile and analyze their filled assessment checklists data. The details of contact persons from ITSU control room has been shared with states and will be shared with national level monitors also.

For the monitoring of Mission Indradhanush, national level monitors have also been assigned one for each district, placing 201 monitors for 201 districts. These monitors have been pooled from various partner agencies viz, Ministry of Health and Family Welfare, National Health System Resource Center, National Institute of Health and Family Welfare, CORE, UNDP, ITSU, DELOITTE, BMGF, JSI, IPE Global, Rotary, UNICEF, WHO-NPSP.

They will reach the assigned districts one day prior to the start of the activity and will check the preparedness of the district for Mission Indradhanush. During their visit to the district, monitors will also meet district level officials and will give them feedback about their observations on daily basis. After monitoring at district headquarters, they will also visit blocks of the same district on subsequent days for monitoring the preparedness at block level. During their visit, they are also expected to visit session sites and monitor sessions on standard session site monitoring format to assess the quality of implementation of activities. The national level monitors will stay in the assigned district for at least 4 days and will visit minimum 3-4 blocks of the districts during the whole monitoring period. The national level monitors will be using two checklists i.e. District Assessment Checklist and Block / Urban area Assessment Checklist and a monitoring tool for session site.

The data entry excel sheet tool based on the filled checklists will be submitted by monitors to Immunization Technical Support Unit (ITSU) by email on daily basis, and will be compiled by ITSU for feedback. The hard copies of all the formats will be submitted to ITSU immediately after monitor returns from the assigned district. The session site monitoring formats filled by the national level monitors will be handed over to local WHO-NPSP office in the district itself.

(The author is Director (M&C), Ministry of Health & Family Welfare, Govt. of India)

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The Prime Minister, Shri Narendra Modi, launched the first indigenously developed and manufactured Rotavirus vaccine: ‘Rotavac’, yesterday. This indigenously developed vaccine will boost efforts to combat infant mortality due to diarrhoea.

Each year, diarrhoea caused by rotavirus results up to 10 lakh hospitalizations and kills nearly 80 thousand children under the age of 5 years. Besides causing emotional stress to the affected families, it also pushes many Indian families below the poverty line and also imposes significant economic burden on the country.

What is Rotavirus infection?

Rotavirus is the most common cause of severe diarrheal (gastro enteritis) disease in infants and young children globally. Children under five years of age, especially those between 6 months and two years are most vulnerable to this disease. Rotaviruses are estimated to be responsible for approximately 5, 27,000 deaths each year, with more than 85% of these deaths occurring in low-income countries in Africa and Asia, and over two million are hospitalized each year with pronounced dehydration.

Among 43 countries participating in the Global Surveillance Network for rotavirus in 2009, 36% of hospitalizations for diarrhea among children aged below 5 years were caused by rotavirus infection. Rotavirus affects populations in all socio-economic groups and is equally prevalent in industrialized and developing countries. So differences in sanitation practices or water supply are not likely to affect the incidence of the infection.

Rotavirus

The name Rotavirus comes from the characteristic wheel-like appearance of the virus when viewed by electron microscope (the name rotavirus is derived from the Latin word Rota, meaning "wheel"). Rota viral diarrhea is an infection of the stomach and bowel. It spreads when infected children do not maintain proper personal hygiene. Virus spreads by contact or airborne route. Most cases of gastroenteritis in children are mild and usually pass within 3-5 days without the need for treatment. However, young children, particularly those under two years of age, are at risk of dehydration. So it is very important that they drink plenty of fluids. In severe cases of gastroenteritis, where there has been significant fluid loss, hospital treatment may be required so that fluid can be replaced through drips.

The first rotavirus infection tends to be the most severe because the body builds up immunity (resistance) to the virus afterwards. This is why these types of infections are extremely rare in adults. It is estimated that every child will have at least one rotavirus infection before the age of five. Most infections occur among children aged between three months and three years old.

Indian Scenario

In India, nationally representative data on the incidence of severe rota virus disease is lacking. However, studies have revealed that on an average 34% of all diarrheal hospitalizations are due to rota virus infection and the proportion of severe rota viral infection has not decreased in the last few years, similar to the global trend indicating that improved sanitation and use of anti-biotics have not been effective on rota virus. The prevalence of Rota virus in new born is high in India to the extent of 73%, but these infections are normally a-symptomatic and the likelihood of acquiring infection increases with the length of stay in the hospital.

While some studies in India have found no association between rotavirus infection and time of year, most have observed an increase in rotavirus-associated diarrhea during the winter months, October to February, throughout the country. The observed proportion of rotavirus cases occurring in the cooler season has ranged from 59% to 72%.

Treatment & Prevention

No specific treatment exists for rotavirus gastroenteritis, and repeat infections are common
in children. Since 2006, vaccines are available for rotavirus infection. Prior to the availability of a vaccine, almost all children became infected with rotavirus by their third birthday. Repeat infections with different viral strains were possible. After several infections with different strains of the virus, children acquire immunity to rotavirus. Adults sometimes get infected, but the resulting illness is usually mild.

**Vaccination**

Use of vaccine should be part of a comprehensive diarrhoeal disease control strategy including, among other interventions, improvements of hygiene and sanitation, administration of oral rehydration solution and overall improved case management.

The new vaccine ROTAVAC has been developed under an innovative public-private partnership model. It involved partnership between the Ministry of Science and Technology, the institutions of the US Government, various government institutions and NGOs in India, supported by the Bill and Melinda Gates Foundation. Funding by Government of India supported basic research in educational and scientific institutions in India. This was also supplemented by the support of U.S. Government institutions like the National Institute of Health. The Gates Foundation and Bharat Biotech India Limited contributed towards product development and testing. The successful launch of the first indigenously developed and produced vaccine today was the result of an extraordinary effort spread over the last 25 years.

The Bharat Biotech India Limited that was involved in the development and production of the vaccine was selected in 1997-1998 by the India-U.S. Vaccine Action Programme and the standard government procedures. The company has given undertaking to keep the cost of the vaccine at US$ 1 per dose. This is the third such vaccine available globally against Rotavirus and, at the current prices, the cheapest and cost effective in terms of disability adjusted life year that satisfy the WHO/UNICEF criteria for a cost-effective intervention.

ROTAVAC is an oral vaccine and is administered to infants in a three-dose course at the ages of 6, 10, and 14 weeks. It is given alongside routine immunizations in the UIP vaccines recommended at these ages. Improving the overall performance of the immunization system is critical to the success of any vaccine introduction.

ROTAVAC represents the successful research and development of a novel vaccine from the developing world with global standards. The Prime Minister lauded this initiative as an example of India’s capabilities for high-end research and development; manufacture of sophisticated pharmaceutical products in India; and, effective Public-Private-Partnership model for finding affordable solutions to societal challenges.

He hoped that the development of the rotavirus vaccine would inspire higher levels of research, development and manufacturing activities in India, not just in medical science, but also in other advanced areas of science and technology. On the launch occasion Prime Minister felt that solutions found in India would have great relevance to the rest of the world, especially the developing world.

**(Dr. H. R. Keshavamurthy is Director (M&C), Press Information Bureau, Kolkata. Email: - featuresunit@gmail.com, himalaya@nic.in)**

**PM assesses progress of healthcare initiatives**

The Prime Minister, Shri Narendra Modi, was recently briefed on the progress of various healthcare initiatives of the Union Government; and India’s progress towards Millennium Development Goals.

The Prime Minister said that an evaluation should be made on the contribution of Swachh Bharat Abhiyaan, towards improvement of health indicators. He called for documentation and adaptation of best practices in the healthcare sector across the country, to enable their rapid scaling up for maximum benefit.

The Prime Minister noted that huge strides were being made in Human Development Index and social parameters, in areas where the Total Fertility Rate (TFR) has fallen significantly. He said that these benefits of low TFR should be brought before the people across the country.

The Prime Minister asked the Health Ministry to keep an eye on acute health problems affecting specific parts of the country, such as Japanese Encephalitis in Eastern Uttar Pradesh and Bihar. He also said more attention was required on the healthcare initiatives for the urban poor.

Minister for Health and Family Welfare, Shri J.P. Nadda, was present at the meeting.
Rural India is the real face of our economy. With 2.4 per cent of the total land area, the country bears the burden of 17.8 per cent of the global population, one-fifth of the world’s share of diseases, one-third of diarrheal and respiratory conditions, one-fourth of maternal conditions and one-fifth of nutritional disorders. But, there is no denying the fact that health standards in India have improved significantly over the years since independence 1947. This paper attempts to analyze the health financing and recent initiatives by the government for a healthy rural India.

Statistics of the Union Ministry of Health and Family Welfare indicate that life expectancy in India has gone up by five years, from 62.3 years for males and 63.9 years for females in 2001-2005 to 67.3 years and 69.6 years respectively in 2011-15. But the national MMR is likely to remain at 139 per 1,000 deliveries in 2015. Crude birth rate in rural areas declined from 38.9 per 1000 in 1971 to 21.4 per thousand in 2013. In the rural areas, it has declined from 30.1 per thousand to 18.0 per thousand during the same period indicating that birth rate in rural areas came down at a faster rate as compared to urban areas. Death rate in rural areas also came down from 16.4 per thousand to 7.7 per thousand during 1971-2010. Extension of medical and health facilities has led to a fall in the rural-urban gap in death rate from 6.7 per thousand to 1.9 per thousand during the period 1971-2010. Infant mortality rate has also declined sharply from 198 per thousand in 1971 to 40 per thousand in 2013.

**Public Expenditure on Health**

Access to healthcare is critically dependent on how healthcare provision is financed. Countries that have universal or near universal access to healthcare have health financing mechanisms which are single-payer systems in which either a single autonomous public agency or a few co-ordinated agencies pool resources to finance healthcare.

Several countries follow this format of healthcare financing mechanism. In these countries, 85 per cent of financing comes from public resources like taxes, social insurance or national insurance which insure health care to over 90 per cent of the population. A number of developing countries in Latin America, Asia and Africa like Costa Rica, Cuba, Brazil, Ghana, Iraq, Iran, Thailand, Sri Lanka etc to have evolved some form of single-payer mechanisms to facilitate near Universal health care. It is only in countries like India and a number of other developing countries, which still rely mostly on out-of-pocket payments and where universal access to health care is remains elusive (Duggal 2013).

The Union Budget for 2015-16 allocates Rs. 33,152 crore to the health sector and took the initiatives for further increase in the direction of universal health care in the country. India still spends only about 1.2 per cent of its gross domestic product, 4.0 per cent of total expenditure and 17.8 per cent of total social sector expenditure on health care in the country (Table-1).

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure as Percentage to GDP</th>
<th>Expenditure as percentage to total expenditure</th>
<th>Expenditure as percentage to total social sector expenditure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-09</td>
<td>1.3</td>
<td>4.6</td>
<td>19.5</td>
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<tr>
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<td>2014-15</td>
<td>1.2</td>
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<td>17.8</td>
</tr>
</tbody>
</table>

**Sources:** Economic survey 2014-15, Govt. of India, Ministry of Finance, (Economic Affairs). 2015, Table-9.9

**Note:** (i) Expenditure on ‘Health’ includes expenditure on medical and Public Health, Family welfare, water supply and sanitation.
(ii) RE-Revised estimates
(iii) BE-Budget estimates

The greater the proportion of public finances the better the access and health outcomes. Thus, India, where public finance accounts for only 17.8 per cent of total health expenditure, has poor equity in access to healthcare and health outcomes in comparison to Sri Lanka, Thailand, Nepal and even Bangladesh where public finance accounts for between 30 per cent and 60 per cent of total health expenditures.

Recent Initiatives for Healthcare

The developing of human resources requires adequate provision of health services, water supply, sanitation, education, housing, nutrition and family welfare facilities which are essential determinants of the quality of life. In fact, there is a direct relationship between water, sanitation, health, nutrition, education, and human well-being. The provision of one without the other is bound to affect the life adversely. Keeping this point in view, the government of India’s recent initiatives for a healthy rural India are delineated below:

Initiatives

- The government of India launched the ‘Swachh Bharat Mission’ on 2 October 2014 which aims at attaining an open defecation free (ODF) India by 2 October 2019, by providing access to toilet facilities to all rural households and initiating solid and liquid waste management activities in all the grama panchayats to promotes cleanliness.

- Mission Indra Dhanush (MID) was launched on 25 December 2014 with the aim of covering all those children who are either unvaccinated or are partially vaccinated against seven vaccine-preventable diseases which include diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis-B by 2020.

- The National AYUSH Mission which includes Ayurveda, Yoga, and Naturopathy, Unani, Siddha and Homeopathy, has been elevated from 9 November 2014 to promote Ayush MEDICAL SYSTEM Through cost-effective services and strengthening of educational systems. Steps are also underway for including yoga in the regular education curriculum.

- Rashtriya Swasthya Bima Yojana (RSBY) was started from 1 April 2008 to provide health insurance coverage for below poverty line (BPL) families. The scheme offers healthcare benefits worth Rs. 30,000 per year to a poor household that can be accessed at empanelled private and public hospitals across the country through a cash less smart card. Till now, more than 3.71 crore active smart card holders are enrolled in this scheme.

- Provisions have been made for incentivizing Accredited Social Health Activists (ASHA) and Anganwadi workers (AW) to promote sanitation in the rural areas of the country.

- In order to improve the availability of the drinking water in rural areas, 20,000 Solar Power based water supply schemes have been approved under the ‘National Rural Drinking Water Program (NRDWP) across all the states for their habitations located in far-flung/hilly areas or where the availability of electricity is a constraint.

- The Budget of 2015-16 has a provision of setting up 5 All India Institutes of Medical Sciences (AIIMS) in J & K, Punjab, Tamil Nadu, Himachal Pradesh, Assam and Bihar, besides limiting the deduction of health insurance premium from Rs. 15,000 to Rs. 25,000 and for senior citizens, a limit of Rs. 30,000.

Conclusion:

Given the multiple variables of health, it is clear that a prevention agenda that addresses the social and economic environment requires cross-sectoral, multi-level interventions that involve/encompass areas such as food and nutrition, education, drinking water, sanitation, housing, employment, industrial and occupational benefits, welfare, including social protection, family and community services, tribal affairs and communications. It is also an established fact that the health care infrastructure is as essential as physical infrastructure for the development of human resources. Hence, it is important to increase the public expenditure on healthcare services as in developed countries of the world.

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Rural India appears set for a transformation in the year ahead with the NDA government initiating a slew of measures aimed at boosting infrastructure, agriculture, skills, jobs and cleanliness in villages where the majority of the country’s population lives.

The Narendra Modi government, in its first year in office, has initiated several schemes specifically aimed at giving a new deal to the rural areas, aimed at in proving the lives of people and raise their incomes.

Schemes

The Saansad Adarsh Gram Yojana, Deen Dayal Upadhyaya Grameen Kaushal Yojana, Soil Health Card scheme, Pradhanmantri Gram Sinchai Yojana, Paramparagat Krishi Vikas Yojana, Deen Dayal Upadhyaya Gram Jyoti Yojana are among the schemes of the BJP-led government which dedicated to rural areas.

Several other initiatives of the government will also beneficially touch lives of people in villages. These include Beti Bachao Beti Padhao, Swachh Bharat Mission, Revamped Swasthya Bima Yojana, Mission Indradhanush, Pradhan Mantri Kaushal Vikas Yojana, Direct Benefit Scheme for LPG subsidy, Shramjeerak Jayate, Pradhan Mantri Micro Units Development and Refinance Agency (MUDRA), Atal Pension Yojana, Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Make in India initiative and Housing for All.

The approach of the government appears to be multi-pronged, innovative and holistic and directed at addressing the problems, ironing out bottlenecks, removing shortcomings and creating new infrastructure.

It is no secret that despite the avowed focus of various governments to rural areas, majority of our villages lack good physical infrastructure,
educational and medical facilities and employment opportunities.

India still has the largest number of people defecating in the open (597 million according to 2014 report by the World Bank and UNICEF). The 2011 census report pointed out that only 30.80 percent of rural households in the country get tap water.

**Agriculture**

Agriculture, which is the backbone of rural life, is seen to be becoming increasingly non-remunerative due to an array of factors including fragmentation of land and rising cost of farm inputs.

Agriculture plays an important role in rural development. There is no denying that poverty has a rural face in India. Rural development and poverty alleviation are thus inextricably linked.

Contribution of agriculture to the Gross Domestic Product (GDP) of the country has fallen from about 30 percent in 1990-91 to less than 15 percent. But this decrease in agriculture’s contribution to GDP has not been accompanied by a matching reduction in the share of agriculture in employment. Over half of the total workforce is still employed by the farm sector.

A study by Centre for Study of Developing Societies (CSDS) found that given an option majority of farmers in the country would prefer to take up some other work. Poor income, bleak future and stress were among the main reasons identified for their desire to give up farming and migrate to cities.

Growth in agriculture is not only crucial to make a significant dent on poverty but also to ensure food security.

The National Democratic Alliance government is seeking to address issues concerning agriculture as well as rural poverty both in the immediate and long term.

Prime Minister Narendra Modi’s emphasis on more crop per drop, soil health card and better irrigation facilities is aimed at ushering a green revolution that is environment-friendly. Many of these agricultural initiatives have been implemented by Mr. Modi as chief minister of Gujarat.

Amid growing concern over use of pesticides, the government is also taking steps to boost organic farming. It is also planning to set up gobar gas plants in villages.

India accounts for only about 2.4 percent of the world’s geographical area and four percent of its water resources but has to support about 17 percent of world’s population.

India is on the way to becoming the country with the highest population in the world and demands on the land will grow to meet the needs of housing, urbanisation and industry. More food will have to be produced from the available land by raising productivity.

**Job Creation**

The government is laying emphasis on job creation and skill development with an apparent aim to help people move out of agriculture and get alternative sources of employment. The proposed industrial corridors are expected to generate employment opportunities in the rural areas. The government has also drawn up ambitious programmes to enhance skills of rural youth. About 58 percent of the country’s population is estimated to be below 29 years.

There is simultaneous effort to promote dignity of labour and make role models of people who have earned a name for themselves by studying in industrial training institutes (ITIs).

The government’s effort to make changes to land Act of 2013 to make acquisition easier for development projects has met with stiff resistance from some opposition parties. The government has said that amendments have been made to the Act based on the feedback from states and in interest of rural areas and farmers but the parties opposed to changes are not convinced.

**Migration**

Distress migration from villages to cities is an area of concern. It causes hardship to migrants who are often forced to take up lowly jobs in cities to sustain themselves. Creation of employment in rural areas and improving infrastructure in terms of roads, schools, hospitals and markets is seen to be the best way to stop distress migration from villages. The Make in India initiative is also likely to have its spin
offs in rural and semi-urban areas by providing people with employment avenues.

Apart from the new initiatives, the National Democratic Alliance government is continuing with some rural development measures initiated by the previous United Progressive Alliance government such as Mahatma Gandhi National Rural Employment schemes. More emphasis, however, is being laid on creation of assets under MGNREGA.

Another problem faced by rural areas is higher dropout rate of children, particularly girls, due to lack of toilets in schools. There is also tendency among parents to give more importance to a boy compared to a girl in terms of education and nutrition.

These issues are being addressed through Beti Bachao, Beti Padhao initiative that seeks to change societal mindset concerning the girl child. The government is also keen that all schools have separate toilets by this year’s Independence Day.

The cleanliness drive of the government will not only improve aesthetics and ambiance in villages but also help prevent disease burden caused by unsanitary conditions and water-logging.

The Swachh Bharat Mission aims at making India “open defecation free” by 2019. The government also aims at making availability of tap water to households on demand over the next few years.

The Saansad Adarsh Gram Yojana is aimed at creating model villages that serve as inspiration to the neighbouring areas. Mr. Modi, who has travelled widely in the country and is estimated to have visited over 5,000 villages outside his native Gujarat, has urged MPs to develop a model village by 2016 and use the experience to achieve two more model villages by 2019.

The government’s thrust on digital India is also expected to reduce the distance between a citizen and the government. As part of Digital India programme, 2.5 lakh gram panchayats are to be connected by National Optic Fibre Network in next three years through seven lakh kilometers of optic fibre cable.

The digital divide at present is skewed in favour of metro cities and the Digital India programme seeks to bridge this gap. According to estimate of the Communications and Information Technology Ministry, Digital India programme is expected to generate five crore direct and indirect employment opportunities.

Many other initiatives of the government are expected to make life easier for people in villages. The thrust on self-attestation will put an end to people in villages being forced to make rounds of government offices just to get documents attested.

The thrust on e-governance and transparency will make it easy for people in to avail of government services while putting an end to corruption.

With more devolution of funds to states and local bodies, the government is keen that elected representatives of panchayati raj institutions take initiative in better execution of works in their areas. It also wants them to make better use of available local resources such as retired teachers.

The government appears clear in its mind that the task of rural transformation can only be achieved with active participation of people.

Thousands of crores have been allocated to development of villages by successive government over the past 68 years but the outcomes have not been commensurate with the money spent due to factors such as corruption.

There appears little doubt that the government has a vision for rural transformation and has embarked on the path with a slew of initiatives.

The Prime Minister has taken the political ownership of the initiatives and is giving them a strong push. The next four years will show how the government charts its course to achieve the ambitious targets.

Some of the major initiatives of the NDA government concerning rural areas are:

**Deen Dayal Upadhyaya Gram Jyoti Yojana:** It will augment power supply to the rural areas and for strengthen sub-transmission and distribution systems as part of government’s commitment to providing 24x7 uninterrupted power supply to all homes.

**Deen Dayal Upadhyaya Gramineen Kaushalya Yojana (DDU-GKY):** It seeks to equip rural poor to compete in the modern job market through training
projects benchmarked to global standards. There will be emphasis on placement, retention, career progression and foreign placement.

**Saansad Adarsh Gram Yojana (SAGY):** The goal of scheme is to translate this comprehensive and organic vision of Mahatma Gandhi into reality, keeping in view the present context. It seeks to substantially improve the standard of living and quality of life of all sections of the population through improved basic amenities, higher productivity, enhanced human development, better livelihood opportunities, reduced disparities, access to rights and entitlements, wider social mobilization and enriched social capital

**Swatchh Bharat Mission (Gramin):** It seeks to accelerate sanitation coverage in rural areas to achieve the vision of Swachh Bharat by 2019 with all gram panchayats in the country attaining “nirmal” status. It also seeks to encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation. The mission aims to develop community-managed environmental sanitation systems focusing on solid and liquid waste management for overall cleanliness in the rural areas.

**Soil health card scheme:** It aims to improve soil fertility on a sustainable basis. The card will help farmers improve productivity by using appropriate inputs concerning nutrients and fertilizers.

**Beti Bachao, Beti Padhao (BBBP):** It seeks to address the issue of declining child sex ratio through mass campaign targeted at changing societal mindsets and creating awareness. The scheme aims at focused intervention and multi-sectoral action in 100 districts with low child sex ratio.

**Mission Indradhanush:** It aims to cover all children who are partially vaccinated or are unvaccinated. It is a nationwide initiative with special attention to 201 high focus districts. It aims to cover all those children by 2020 who are either unvaccinated or are partially vaccinated against seven vaccine preventable diseases – diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis B.

**Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** The flagship scheme for skill training of youth will be implemented by the Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC). The scheme will cover 24 lakh persons. Skill training would be done based on the National Skill Qualification Framework (NSQF) and industry led standards.

**Pradhanmantri Gram Sinchai Yojana:** It is aimed at irrigating the field of every farmer and improving water use efficiency to provide ‘per drop more crop’.

**Atal Pension Yojna (APY):** It focuses on the unorganised sector and will provide subscribers a fixed minimum pension between Rs 1000 and Rs. 5000 per month starting at the age of 60 years, depending on the contribution option exercised on entering at an age between 18 and 40 years.

**Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY):** An annual life insurance of two lakh rupees would be available on the payment of premium of Rs. 330 per annum by the subscribers. The PMJJBY is available to people in the age group of 18 to 50 years having a bank account from where the premium would be collected through the facility of “auto-debit”.

**Pradhan Mantri Suraksha Bima Yojana (PMSBY):** Risk coverage will be two lakh rupees for accidental death and full disability and one lakh rupees for partial disability. The scheme is available to people in the age group 18 to 70 years with a bank account, from where the premium would be collected through the facility of “auto-debit”.

*(Dr. Sandhya Sood is Assistant Professor, Tau Devi Lal Government Girls College, Murthal)*
Socio-economic factors of inhabitants are important determinants of health outcomes. Availability, accessibility and quality of health services in different regions of Himalaya play an important role in regional variations in health outcomes. There are variations in the financing and provisioning of public and private health services in the remote areas of the state which also depends on the development of the state. In the region there is high reliance on the private sector for treatment, which is dominated by informal practitioners. The major responsibility for financing, provisioning, and administration of health rests with the respective states. Over the last two decades there has been growing recognition of the persistence of inequities in health outcomes as well as access to health services in the state. Studies show that persistence of inequities and worsening of health outcomes for vulnerable groups such as scheduled caste, scheduled tribes, women and children, especially those belonging to the poor and marginalized section. These groups have faced social and economic discrimination that disadvantages them in terms of access to resources and basic needs which is reflected in poor health outcomes.

Garhwal Himalaya has its diverse topography, vegetation, people and traditions and occupies an important place in Indian subcontinent. About 80% of the total population is rural and the inhabitants are called Paharis. In the remote areas of this region traditional beliefs in health care are still maintained and modern trends of health care are yet to reach adequately. Due to lack of availability and accessibility of proper health care facilities coupled with low income sources (poor condition); the inhabitants use different medicinal plants in primary health care of children and the adults. According to WHO approximately 80% of World population in developing countries depends on traditional medicines for primary healthcare and modern medicine too in which nearly 25% are based on plant derived drugs. Himalayan communities are well versed with valuable knowledge accumulated through long period of experience, As they are dependent on the forests for their sustenance and for the treatment of various ailments. There is need to document such practices required in view of gradual disappearance of this knowledge in new generations.
Though, the primary issue is how Himalayan communities respond to critical social and health challenges, in ways that promote sustainability and wellbeing of these communities. These communities provide diverse experiences for learning with local people and resources.

**Rural Health Care System**

The health care system in rural areas has been developed as a three tier system:

1) **Sub-Centre** with a population of 3000 for Hilly, Tribal and difficult areas whereas 5000 for plain area.

2) **Primary Health Centre** with a population of 20,000 for hilly, Tribal and difficult areas and 30,000 for plain areas.

3) **Community Health Centre** with a population of 80,000 for hilly, tribal and difficult areas and 1,20,000 for plain areas.

**Sub-Centres (SCs)**

The Sub-Centre is the most peripheral and first contact point between the primary health care system and the community. Each Sub-Centre is manned by one ANM ( Auxiliary Nurse Midwife) and one Male Health Worker MPW(M). Sub-centres are assigned tasks relating to interpersonal communication in order to bring about behavioral change and provide services in relation to maternal and child health, family welfare, nutrition, immunization and control of communicable diseases programmes. The Sub-centres are also provided the basic drugs for minor ailments needed for taking care of essential health needs of men, women and children. The Department of Family Welfare is providing 100% Central assistance to all the Sub-Centres in the country. There were 146026 Sub Centres functioning in the country as on September, 2005 which have increased to 148124 in 2011.

**Primary Health Centres (PHCs)**

The PHCs were envisaged to provide an integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. The PHCs are established and maintained by the State Governments under the Minimum Needs Programme (MNP)/ Basic Minimum Services Programme (BMS). At present, a PHC is manned by a Medical Officer supported by 14 paramedical and other staff. It has 4 - 6 beds for patients. The activities of PHC involve curative, preventive, primitive and Family Welfare Services. There were 23236 PHCs functioning as on September, 2005 in the country as compared to 23887 in 2011.

**Community Health Centre (CHCs)**

The Community Health Centre (CHCs), the third tier of the network of rural health care units, was required to act primarily as a referral centre for 4 PHCs for the patients of medicine, surgery, paediatrics and gynaecology requiring specialised treatment. The objective was to make modern health care services accessible to the rural people and to ease the overcrowding of the district hospitals. Available facilities in the CHC are: 30 beds for indoor patients; operation theatre, labour room, X-ray machine, pathological laboratory, standby generator etc. along with the complementary medical and para medical staff.

(Indian Newborn Action Plan (INAP))

India loses about 7.5 lakh newborns (<28 days) every year primarily due to prematurity, sepsis and asphyxia. The India Newborn Action Plan (INAP) was launched in September 2014 to end all preventable newborn deaths and still births to a single-digit by 2030. The present neonatal mortality rate is 28 per thousand live births.

**Salient features**

ANMs can now administer a pre-referral dose of antenatal corticosteroid (Injection Dexamethasone) to pregnant women going into preterm labour and pre-referral dose of Injection Gentamicin and Syrup Amoxicillin to newborns for prevention of Sepsis and Prematurity in young infants (up to 2 months of age) at the sub-centers.

Under the ‘Life Cycle’ approach, attention is paid to health of adolescents in addition to care of the mothers during pregnancy, at the time of and after delivery.

‘Kangaroo mother care’ for strengthening of care for preterm newborn and for sick newborn. Nearly half a million newborn can be saved every year with promotion of Kangaroo Mother Care.

Ensuring injection Vitamin K to all newborn children at the time of birth at the facility. This will prevent death due to bleeding disorders.
India celebrated International Day of Yoga on 21st June 2015 to highlight the importance, relevance and usefulness of this ancient Indian technique to the overall benefit of mankind. On December 11, 2014, the 193 member UN General Assembly approved observation of 21 June as “International Day of Yoga” by consensus with a record 177 countries co-sponsoring the resolution. It is a great opportunity for all of us to explore ways and means of propagating this knowledge through multiple strategies.

It all started when the Prime Minister of India Shri Narendra Modi while addressing the 69th session of United Nations General Assembly (UNGA) on September 27, 2014 extolled the delegates to adopt Yoga. “Yoga is an invaluable gift of ancient Indian tradition. It embodies unity of mind and body; thought and action; restraint and fulfillment; harmony between man and nature and a holistic approach to health and well-being. Yoga is not about exercise but to discover the sense of oneness with ourselves, the world and Nature. By changing our lifestyle and creating consciousness, it can help us to deal with climate change. Let us work towards adopting an International Yoga Day”, he said.

What is Yoga

Yoga is essentially a spiritual discipline based on an extremely subtle science which focuses on bringing harmony between mind and body. It is an art and science for healthy living. The literal meaning of the Sanskrit word yoga is “to add”, “to join”, “to unite”, or “to attach” is derived from the root *yuj*. In the context of the Yoga Sutras of Patanjali, the root *yuj samādhau* (to concentrate) is considered by traditional commentators as the correct etymology. The ultimate goal of Yoga is moksha (liberation) though the exact definition of what form this takes depends on the philosophical or theological system with which it is linked. Apart from the spiritual goals, the physical postures of yoga are used to alleviate health problems, reduce stress and make the spine supple in contemporary times. Yoga is also used as a complete exercise program and physical therapy routine.

The aim of Yoga practice (sādhana) is to overcome all kinds of sufferings that lead to a sense of freedom in every walk of life with holistic health, happiness and harmony. The science of Yoga has its origin thousands of years ago, long before the first religion or belief systems were born. Yoga is widely considered as an outcome of the Indus Valley Civilisation – dating back to 2700 BC – and has proven itself to cater to both material and spiritual uplift of humanity. Though Yoga was practiced in the pre-Vedic period, the great sage Patanjali systematised and codified the then existing Yogic practices, its meaning and its related knowledge through Patanjali’s Yoga Sutras. After Patanjali, many sages and Yoga masters contributed greatly for the preservation and development of the field through well documented practices and literature. In early 11th century, the Persian scholar Al Biruni visited India, lived for 16 years and translated
several significant Sanskrit works into Arabic and Persian languages. One of these was Patanjali’s Yogasutras. Al Biruni’s translation preserved many of the core themes of Patañjali’s Yoga philosophy, but certain sutras and analytical commentaries were restated. Al Biruni’s version of Yoga Sutras reached Persia and Arabian Peninsula by about 1050 AD.

Yoga has spread all over the world by the teachings of eminent Yoga masters from ancient times to the present date. Today, everybody has conviction about Yoga practices towards the prevention of disease, maintenance and promotion of health. Millions and millions of people across the globe have benefitted by the practice of Yoga and the practice of Yoga is blossoming and growing more vibrant with each passing day.

Yoga works on the level of one’s body, mind, emotion and energy. This has given rise to four broad classifications of Yoga: Karma Yoga where we utilise the body; Jñāna Yoga where we utilise the mind; Bhakti Yoga where we utilise the emotion and Kriya Yoga where we utilise the energy (breath or pran). Each system of Yoga we practice falls within the gamut of one or more of these categories.

**Yoga Sadhanas**

The widely practiced Yoga sadhanas are: **Yama, Niyama, Āsana, Prānāyāma, Pratyāhara, Dhārana, Dhyāna, Samādhi, Bandhas and Mudras, Shatkarmas, Yuktāhāra, Mantra-japa, Yukta-karma** etc. Yamas are restraints and Niyamas are observances. These are considered to be pre-requisites for further Yogic practices. Āsanas, capable of bringing about stability of body and mind, “kuryat-tadasanam-sthairyam”, involve adopting various psycho-physical body patterns and giving one an ability to maintain a body position (a stable awareness of one’s structural existence) for a considerable length of time. Prānāyāma consists of developing awareness of one’s breathing followed by willful regulation of respiration as the functional or vital basis of one’s existence. It helps in developing awareness of one’s mind and helps to establish control over the mind. In the initial stages, this is done by developing awareness of the “flow of in-breath and out-breath” (svāsa-prasvāsa) through nostrils, mouth and other body openings, its internal and external pathways and destinations.

**General Guidelines for Yoga Practice**

A Yoga practitioner should follow the guiding principles while performing Yogic practices:

- **Cleanliness**—includes cleanliness of surroundings, body and mind.
- Yogic practice should be performed in a calm and quiet atmosphere with a relaxed body and mind.
- Yogic practice should be done on an empty stomach or light stomach. Consume small amount of honey in lukewarm water if you feel weak.
- Bladder and bowels should be empty before starting Yogic practices.
- A mattress, Yoga mat should be used for the practice.
- Light and comfortable cotton clothes are preferred to facilitate easy movement of the body.
- Yoga should not be performed in state of exhaustion, illness, in a hurry or in acute stress conditions.
- In case of chronic disease/ pain/ cardiac problems, a physician or a Yoga therapist should be consulted prior to performing Yogic practices.
- Yoga experts should be consulted before doing Yogic practices during pregnancy and menstruation.
- Breathing should be always through the nostrils unless instructed otherwise.
- Do not hold body tightly, or jerk the body at any point of time.
- It takes some time to get good results, so persistent and regular practice is very essential.
- Yoga session should end with meditation/ deep silence / Śhānti pat āha.
- Bath may be taken only after 20-30 minutes of practice.
Food may be consumed only after 20-30 minutes of practice.

**Benefits of Yoga**

Yoga is essentially a path to liberation from all bondage. However, medical research in recent years has uncovered many physical and mental benefits that Yoga offers, corroborating the experiences of millions of practitioners. A small sampling of research shows that Yoga is beneficial for physical fitness, musculoskeletal functioning and cardiovascular health. It is beneficial in the management of diabetes, respiratory disorders, hypertension, hypotension and many life style related disorders. Yoga helps to reduce depression, fatigue, anxiety disorders and stress. Yoga regulates menopausal symptoms. In essence, Yoga is a process of creating a body and mind that are stepping-stones, not hurdles, to an exuberant and fulfilling life.

The benefits of Yoga in physical and mental well being of the people have been quite established. Incorporating Yoga in to the curriculum of medical education is a much needed intervention. In the context of increasing life-style related health problems, and rising cost of curative treatment, the conventional curriculum guided by Western medicine is no more compatible. Even considering the amount of stress generated among medical and health professionals, Yoga appears to be the only ray of hope for facing the enormous challenges. Every medical college should therefore seriously think in terms of introducing Yoga for the faculty as well as students for disease prevention and health promotion. Some can specialize in therapeutic uses of Yoga.

To conclude, Yoga provides a holistic approach to health and well-being and wider dissemination of information about the benefits of practicing Yoga for the health of the world population. Yoga also brings harmony in all walks of life and thus, is known for disease prevention, health promotion and management of many lifestyle-related disorders.

(Source PIB)

**First International Day of Yoga creates world record**

India on June 21, 2015 set two new Guinness World Records for Yoga with 35,985 participants performing ‘asanas’ at one venue and as many as 84 nationalities joining in the official observation of International Yoga Day on Rajpath in New Delhi.

Prime Minister Narendra Modi, along with officials of various ministries, school children, NCC cadets, Army personnel and officials performed yoga asanas at the mega event on Rajpath. Celebrations were held in the national capital after the United Nations had in December last year declared 21 June as International Yoga Day, with 177 countries voting in favour of the resolution. The proposal had been mooted by the Prime Minister during his first address to the UN General Assembly in September last year.

A yoga enthusiast himself, the Prime Minister joined over 35,000 people, including leaders, officials, soldiers and students, in a yoga demonstration at the historic Rajpath.
maternal and Neonatal Tetanus Eliminated from the country

Total of 32 States/UTs have been validated for Maternal and Neonatal Tetanus Elimination (MNTE) and the formal communication from WHO has been received. For the remaining four states of Nagaland, Meghalaya, Dadra & Nagar Haveli, and Jammu & Kashmir, field visits have been conducted by the joint team of WHO and UNICEF and the parameters for MNTE validation were found to be satisfactory. However, the formal communication from WHO is expected in two months.

This has been possible through systems strengthening including improvement of institutional delivery which is also a proxy indicator for clean delivery and clean cord care practices and by strengthening Routine Immunization. Strategies to improve clean delivery have been included in the innovative Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakaram (JSSK).

Maternal and Neonatal Tetanus Elimination (MNTE) is defined as less than one neonatal tetanus case per thousand live births per year in every district. In 1989, global deaths from Neonatal Tetanus (NT) were estimated at 7.87 lakh per year of which India contributed approximately 2 lakh deaths.

New Vaccines

In a bid to protect the children from more vaccine preventable diseases, new vaccines are proposed to be introduced as part of India's Universal Immunisation Programme (UIP). Introduction of these vaccines will be done in a phased manner over a period of time, depending upon the field level assessments and preparedness. In addition, it has been decided to introduce an adult vaccine against Japanese Encephalitis (JE) in the high burden districts.

The new vaccines are:

a. Inactivated Polio Vaccine (IPV)

   India is Polio free but to maintain this status, the Injectable Polio Vaccine will be introduced in October 2015. This will benefit 2.7 crore children every year.

b. Adult Japanese Encephalitis (JE) vaccine

   20 high burden districts have been identified in Assam, Uttar Pradesh and West Bengal for adult JE vaccination in the age-group of 15-65 years. This will cut down deaths and morbidity due to Japanese Encephalitis in adults as well.

c. Rotavirus vaccine

   Rotavirus is the leading cause of severe diarrhoea among infants and young children in the world. Each year India loses approximately 2 lakh children to diarrhoea out of which 1 lakh deaths are caused by Rotavirus. Rotavirus vaccine implemented to full scale would save approximately 1 lakh lives every year.

d. Measles Rubella vaccine

   - Measles Rubella vaccine eliminates measles and controls Rubella in the country. The vaccine will help to reduce incidence of Congenital Rubella Syndrome. As on date, approximately 25,000 cases of CRS are estimated each year and if the child survives, this adds to the disabilities in the country.
   - MR vaccination campaign will be carried out after appropriate planning and will cover 45 crore children.
Mission Indradhanush

The Ministry of Health & Family Welfare has launched “Mission Indradhanush”, depicting seven colours of the rainbow, to fully immunize more than 90 lakh children who are either unvaccinated or partially vaccinated, those that have not been covered during the rounds of routine immunisation for various reasons. They will be fully immunised against seven life-threatening but vaccine preventable diseases which include diphtheria, whooping cough, tetanus, polio, tuberculosis, measles and hepatitis B. In addition, vaccination against Japanese Encephalitis and Haemophilus influenzae type B will be provided in selected districts/states of the country. Pregnant women will also be immunized against tetanus.

The first round of the first phase started from 7 April 2015. World Health Day in 2011 high focus districts in 28 states and carried out for more than a week. This was followed by three rounds of more than a week in the months of April, May and July 2015, starting from 7th of each month. The 2011 high focus districts account for nearly 50% of all unvaccinated or partially vaccinated children in the country. Of these, 82 districts are in just four states of UP, Bihar, Madhya Pradesh and Rajasthan and account for nearly 25% of all unvaccinated or partially vaccinated children of the country.

Within the districts, the Mission will focus on 4,000,000 high risk settlements identified as pockets with low coverage due to geographic, demographic, ethnic and other operational challenges. These include nomads and migrant labour working on roads, construction sites, riverbed mining areas, brick kilns, and those living in remote and inaccessible geographical areas and urban slums, and the undernourished and hard to reach populations dwelling in forest and tribal areas.

Total of 297 districts will be targeted in the second phase to commence from September 2015.

Achievements in the first round of first phase (7-16 April 2015)

- 2.1 lakh sessions held
- 56.6 lakh antigens administered
- 5.8 lakh pregnant women immunised
- 2.5 lakh pregnant women fully immunised
- 20.8 lakh children immunised
- 55% of these are from Uttar Pradesh
- For approx. 29%, this was their first contact
- Approx. 24% belonging to <5 years of age
- 4.7 lakh children fully immunised
- The preparation and learning during the implementation of the first round have led to health systems strengthening in terms of drawing up detailed micro plans, designing study frameworks for stringent monitoring and evaluation of the immunisation rounds in the states (more than 8600 state and central level monitors have been deployed); training of nearly 9 lakh frontline workers; identification and analysis of limiting factors in different states leading to creating effective structures to mitigate them.
- The children immunized under Mission Indradhanush are in addition to the children who are immunized under the Universal Immunisation Programme.
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