Integrated Disease Surveillance Programme (IDSP) is India’s flagship programme for disease surveillance of epidemic prone diseases with the key objective to monitor disease trends and to detect and respond to outbreaks in early rising phase through trained rapid response team. A good surveillance system must be comprehensive and sensitive to achieve the laid down objectives, for which Information and Communication Technology has proven to have played a definite role under IDSP. This issue of NCDC Newsletter has a lead story on pre-testing of Integrated Health Information Platform (IHIP), a web enabled software application based on the revised reporting formats of disease surveillance and outbreak reporting under IDSP.

In this issue we also report on the investigation and management of first reported case of human trypanosomiasis in India facilitated by NCDC. India has accelerated efforts to meet WHO measles elimination target for 2020. India Epidemic Intelligence Service Officers assisted in a measles outbreak investigation in Delhi with state health department. This investigation helped in delivery of vitamin A to all affected children. Several gaps were identified for correction in immunization service delivery while heading towards measles elimination by 2020.

NCDC news section highlights important activities carried out in this quarter including visit by Hon’ble Minister of State for Health and Family Welfare, Smt. Anupriya Patel to NCDC and observance of World Health Day in the institute, launch of revamped NCDC website, orientation workshop for assessing health impacts of air pollution. I hope you enjoy going through the newsletter and I look forward to any feedback from you.

IDSP takes a leap towards Integrated Health Information Platform

Integrated Disease Surveillance Programme (IDSP) is a decentralized National Health Programme under India’s National Health Mission, which is intended to strengthen disease surveillance system across the country for epidemic prone diseases and to detect and respond early warning signals of outbreaks through trained rapid response teams. The data is being collected through online software application on ‘S’ syndromic; ‘P’ probable; & ‘L’ laboratory confirmed cases through prescribed reporting formats using standard case definitions. These formats were developed in 2004 and were updated in 2009. Existing Software Application was designed & developed by NIC in year 2007-08 as a MoU between IDSP, NIC & NICSI. The software application did not support near Real Time data entry, availability of GIS and advanced data analytics.

In 2015 Joint Monitoring Mission report of Integrated Disease Surveillance Program (IDSP) strongly recommended strengthening the public health surveillance system through re-prioritization of the list of diseases under the
Program. Further, the report called for assessing the need for collecting accurate and reliable epidemiological data for action.

In December 2016, National Center for Disease Control (NCDC), conducted the disease re-prioritization workshop for IDSP and subsequently identified 32 priority health conditions for surveillance. In addition, the workshop also called for an ICT Master Plan and Minimum Data Set for health conditions under surveillance to strengthen early outbreak detection and public health response.

At the request of MoHFW, Govt of India, WHO Country Office, India with IDSP has designed and developed Integrated Health Information Platform (IHIP), a web enabled software application based on the revised reporting formats of disease surveillance and outbreak reporting. This is web-enabled near-real-time electronic health information system. IDSP will be a stakeholder to the Integrated Health Information Platform (IHIP), and is designed to receive person-level data from health facilities across all States and Union Territories on all health events.

All applicable Government of India’s e-Governance standards, IT, data & metadata standards have been incorporated. In addition, the platform proposes to incorporate various essential registries: such as

- health facility registry (up to village level),
- patient registry,
- essential medicines and commodities registry,
- health conditions registry,
- surveillance officer’s registry,
- port registry (airports & seaports)
- population registry and
- user registry

Key features of Integrated Health Information Platform (IHIP),

- Real time data reporting (along through mobile application); accessible at all levels (from villages, states and central level)
- Advanced data modeling & analytical tools
- GIS enabled Graphical representation of data into integrated dashboard
- Role & hierarchy-based feedback & alert mechanisms
- Geo-tagging of reporting health facilities
- Scope for data integration with other health programs
The web enabled software application and mobile application was pretested by WHO and IDSP in Karnataka and Andhra Pradesh. Functionality of the portal and mobile application was assessed in the field.

It was pre-tested in various tiers of health facilities from Sub Centre, Primary Health Centre, Taluk Hospital to Medical College Hospital.

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<td>1.</td>
<td>Karnataka</td>
<td>Mysore</td>
<td>26-28 March 2018</td>
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<td>2.</td>
<td>Andhra Pradesh</td>
<td>Kadapa</td>
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In the field, at the health facility, data entry personnel entered few records of dummy data into online reporting formats of IHIP after detailed orientation on IHIP. Syndromic data collection was pre tested through android mobile application installed on android mobile phone of health worker from Sub centres who were asked to visit house-to-house to enquire about signs/symptoms in order to enter case based data in the application. Pre testing on syndromic surveillance form was done through android mobile application only without online portal and Presumptive and Lab surveillance form was done with direct entry into portal.

The results of pretesting of Integrated Health Information Platform (IHIP) were shared to Shri Lav Agarwal, Joint Secretary MoHFW in a debriefing meeting on 6th April 2018 at Nirman Bhavan. The reports along with issues and comments were also shared with WHO for rectification and changes as suggested to incorporate in IHIP Portal & IHIP mobile application.

The tentative roadmap of IHIP is as follows:

| Field testing of IHIP Software application | April 2018 |
| Demonstration of IHIP Software Application & mobile application to State Surveillance Officers | May 2018 |
| National Training of Trainers (TOT) workshop on IHIP | June 2018 |
| Roll out of IHIP Software Application for IDSP in selected states | July 2018 |

(Contributed by Drs. Suhas Dhandore, DD & Pradeep Khasnobis, JD)
Outbreak Investigation

Human African Trypanosomiasis a case study

Human African trypanosomiasis (HAT), also known as sleeping sickness, is a vector-borne parasitic disease caused by infection with protozoan parasites belonging to the genus Trypanosoma. The disease is transmitted to humans by tsetse fly (Glossina genus) bites which have acquired their infection from human beings or from animals harboring human pathogenic parasites.

An Indian lady developed fever and other constitutional symptoms few days after returning from a personal family visit to a HAT endemic country in Africa. The patient initially developed a boil on forearm which she recollected was after an insect bite during the overseas visit. Treatment with broad spectrum antibiotics/antimalarials did not provide any relief. NCDC was requested for support in management of case. Infection with Trypanosomiasis was suspected on the basis of travel history and insect bite. Blood smear examination done on request of NCDC by Indian Veterinary research Institute Barielly, confirmed the case to be of Trypanosomiasis and the organism was identified to be Trypanosoma brucei rhodesiense by PCR.

The patient was treated with anti-trypanosomiasis drugs arranged by NCDC from WHO. Continuous support on treatment protocols was provided to treating physicians by doctors experienced in treating Trypanosomiasis. The patient remained under intensive care and recovered after four weeks of treatment.

In all likelihood this was the first reported case of Trypanosoma brucei rhodesiense in India. Other species of Trypanosoma are found in India which affects animals predominantly. T. lewisi is a natural parasite of rats while T. evansi is a pathogenic species of number of domesticated animals like cattle horses and causes a disease called “surra” in animals.

Tsetse flies are found only in sub-Saharan Africa and there is no risk of transmission of HAT in India as the vector responsible is not present in India.

Measles Outbreak, Shram Vihar, Okhla, South-East District, Delhi, February 2018

Globally in 2016, there were an estimated 89,780 measles related deaths. In 2017, globally WHO reported 1,15,117 cases of measles of which India accounted for 55,226 (48%). Although, targeted for elimination by 2020, measles outbreaks continue to occur all over India particularly among underserved population. India in 2017 reported 229 outbreaks of measles through Integrated Disease Surveillance Programme (IDSP). On 18 February 2018 the District Surveillance Unit of IDSP reported suspected measles outbreak from Shram Vihar area to Central Surveillance Unit. Shram Vihar is an urban slum located in Okhla Block, South-East District of Delhi. It is a temporary settlement area divided into 8 blocks (A-H), predominantly inhabited by the Indian migratory and international migrant community with an approximate population of 1759 mostly comprising daily wage earners, beggars, laborers and rag pickers. There is no proper sanitation, drainage system, roads and no government health care and education facility in the area. Epidemic Intelligence Service (EIS) officers were deployed to aid district and investigate outbreak from 24 February 2018 to describe epidemiology and provide evidence based recommendations.
Method

We defined a suspected measles case as fever and maculopapular rash with cough or coryza or conjunctivitis in a resident of Shram Vihar from 25 November 2017 to 7 March 2018. We identified cases by conducting house to house survey and setting up enhanced passive surveillance through the participation of local informers. Data was collected using semi-structured questionnaire containing information on sociodemographic, clinical presentation, vaccination status, and exposure history. We assessed routine immunization (RI) system and conducted key informant interviews. We confirmed measles by IgM titres in serum by ELISA. We calculated proportions, attack rate and case fatality rate.

Result

We identified 166 measles cases (53% females) including three deaths with median age of 3 years (range: 1 month-13 years). Overall attack rate (AR) was 9% (166/1759) and case fatality rate 2% (3/166). AR among children <5 years was 35% (113/324). Six cases (4%) had history of receiving MCV. Among cases, 122 (74%) received one dose of Vitamin A and 42 (25%) two doses. All three death cases were <5 years, unvaccinated and had diarrhea. Seven out of eight serum samples tested positive for measles IgM by ELISA. Outbreak area was included in RI plan since 2017 but no survey conducted. One outreach session per month was conducted with no mobilization support and no duelist prepared. Interview reveals several issues pertaining to RI. The system was overburdened to handle a population of 3-4 lakhs. There was no local USHA or AWW for the area for survey and mobilization activities. There was lack of proper local support with no appropriate place to sit for vaccination.

Public Health Action

House to house survey was conducted with administration of vitamin A to measles cases. Immunization camp was conducted out by local health authority on 5 Mar 2018 in three blocks (B, C and E) along with vitamin A administration to the cases.

Conclusions

We conclude that this was a laboratory confirmed measles outbreak among the migratory community likely due to poor vaccination coverage resulting from inadequate routine immunization activities. We recommended for short term, intermediate and long term the followings:-

Recommendations

Short term

1. Administration of two doses of vitamin A to all measles cases.
2. Set up enhanced surveillance system for the next two months in the outbreak area by involving the local informers and religious leaders for reporting of cases of fever with rash to the health authority.
3. Rationalization of micro planning as per injection load.
4. Consider advising guardians to isolate child for at least 5 days after onset of rash.

Intermediate

1. Conduct a household survey for routine immunization and planned the immunization sessions accordingly.
2. Conduct advocacy meetings with the religious leaders, local leaders and social workers for community mobilization for immunization activities.

Long term

1. Recruit local USHA and Anganwadi workers (AWW) for the area as per the population.
2. Set up sustainable health care delivery model.
Figure 1: Measles cases by date of rash onset, Shram Vihar, Delhi, India, Jan-Mar 2018 (n=166)

Figure 2: Distribution of measles cases, Shram Vihar, Delhi, India, Jan-Mar 2018 (N=130*)
*Cases located by house to house survey

(Contributed by Drs Kevisetuo A. Dzeyie & SS Qadri (EISOs) & NCDC Officers)
Smt. Anupriya Patel, Minister of State for Health and Family Welfare visited NCDC on 17 January, 2018. During her visit she interacted with India Epidemic Intelligence Service officers undergoing two years training in field epidemiology at NCDC in collaboration with CDC Atlanta under Global Health Security Agenda (GHSA). She visited the strategic health operations centre in NCDC used during public health emergencies and reviewed the Seasonal Influenza (H1N1) status through video conferencing with the States of Rajasthan, Gujarat and Uttar Pradesh.

Dr. AC Dhariwal, Director NCDC apprised the Minister about technical divisions under NCDC and their achievements. In her address at NCDC, the MoS (Health) appreciated cutting edge public health work being carried out at NCDC. She mentioned that the Ministry has high expectations from the Institute and the intent is reflected by the allocation of budget of Rs.382 Cr for up-gradation of NCDC campus.

She also mentioned about the Niti Ayog’s vision document (2017-18 to 2019-20) that suggests that NCDC can act as a focal point with greater authority and resources for disease surveillance, monitoring of health status, educating the public, providing evidence for public health action and enforcing public health regulations. The MoS (Health) further said that the National Health Policy 2017 envisages for greater role of preventive and promotive aspects than curative and NCDC could play a pivotal role in this aspect. Mentioning about Hon’ble Prime Minister’s vision regarding Resurgent India, she ensured all the support from the Ministry. She instructed NCDC faculty to be in touch with State Health Authorities and make field visits to monitor the working of NCDC branches and other field activities. She issued necessary directions for disease surveillance, monitoring of health status, educating the public, providing evidence for public health action and enforcing public health regulations.
Orientation training for newly recruited batch of Central Health Services Officers

An orientation training program of the 9 newly recruited CHS officers was conducted at NCDC Delhi from 8th to 12th January 2018 by the Division of Malarialogy and Coordination, NCDC. The training program was attended by officers from NCDC Delhi, NCDC Coonor Branch, NACO and GNCTD. The 5 day orientation was inaugurated by Dr. AC Dhariwal, Director NCDC who emphasized on the need for such workshops so that the officers develop a long term vision for their organization and it gives them the much required boost and confidence to execute their responsibilities as public health officers.

The officers were briefed about important public health programmes, namely NVBDCP, RNTCP, and NPCDCS. They were also provided orientation on technical activities of NCDC. During the training period these young officers also got an opportunity to network with senior officers of Central Health Services during formal and informal sessions. Participants were also apprised about various office procedures, leave rules and financial rules.

NCDC observes World Health Day

Every Year World Health Day is celebrated by all WHO member Countries to raise the awareness on issues of public health importance among policy makers, health professional and general public. This year theme is Universal Health Coverage: Everyone, Everywhere. On the occasion, Centre for NCD, NCDC organized a technical seminar on 26 March 2018 for NCDC officers, scientists, scholars, public health specialists, faculty and students from Medical Colleges, Delhi.

Dr. A C Dhariwal (Advisor, NVBDCP) and Dr Sujeeet Kr. Singh (Director, NCDC) were the Guest of Honour for the event.

Experts from All India Institute of Medical Sciences, (Dr Rajesh Sagar, Prof. Psychiatry) and WHO India Office, Health System Development (Dr Hilde, Team leader and Dr Chandrakant, National professional Officer, UHC) deliberated on the Universal Health Coverage

Universal health coverage (UHC) aims that every individuals irrespective of his/her age, sex, race, ethnicity, socio-economic status, and place of living should have access to the services in need, i.e., preventive, promotive and curative without facing the financial hardship. UHC it not a new concept, it is based on earlier Alma Atta declaration for “Health For All”. Universal health coverage is a dynamic process which changes with emerging and re-emerging issues of public health importance and as per the expectations of the community from health system.

Director NCDC, Dr. Sujeeet Kr Singh in his inaugural address highlighted the role played by NCDC in UHC perspective by the eradication of diseases, e.g., smallpox, Yaws, guineaworm etc. and early detection and management of outbreaks, surveillance and monitoring of communicable and Non Communicable diseases and other public health issues.

Dr. Chandrakant presented the Theme: Universal Health coverage-Everyone, Everywhere. He
focused what does UHC means and what is not a UHC and on the steps taken by the Government in the directions of UHC, i.e., National Health policy 2017, Ayushman Bharat Programme etc. Dr Dhariwal and Dr R N Rai chaired the session on the Universal health coverage. In the technical session presentation was made by Dr Hilde and Dr Rajesh Sagar, Dr Hilde, Team Leader, Health System, WHO India Office, presented on the UHC index and its measurement. UHC index ranges from 0 to 100%. India UHC coverage was 56% which was lower than median value of Global UHC value (65%). She mentioned that none of the country in world has 100% UHC coverage. She stated that even if some countries achieves 100% UHC in future it need continuous rethinking and changes as it is not static rather a dynamic process in light of emerging and re-emerging diseases and people need and expectation from health system.

Dr Rajesh Sagar in his presentation on “Mental Health: Critical area under UHC”, presented on the burden of mental illness globally and In India. He highlighted gaps in addressing the mental health, e.g. shortage of human resources, infrastructure, budget allotment, etc.

For achieving the UHC mental health should be a part of comprehensive health care and govt need to increase financial allocation which is currently <1 % to mental health.

In the afternoon technical session on Depression: Break the silence was organized for NCDC officers and officials. Technical session was chaired by Dr Prabha Arora (Addl. DDG, NCD) and Dr Somnath Karmakar (Addl. Director and Head CARD Division).

Dr Smita Deshpandey (HOD Psychiatry, PGIMER & RML hospital) presented on common causes and the sign & symptoms of depression for easy understanding of all participants in Hindi. She also focused on the role of medication & counseling and in the management of depression. Prof. Uday Kumar Sinha (Head Clinical psychology, IHBAS) focused on the role of counseling in management of depression. He discussed how to identify the thoughts running in the mind of affected person and elaborated on the techniques and tips of counselling for family members. He also spell out what should not be done by the family members while conversing with individual having depression.

National Consultation on Tools for Assessing Health Impacts of Air Pollution

Centre for Environmental & Occupational Health, Delhi organized a national consultation on 16th and 17th January, 2018 at Committee Room of Epidemiology and Diseases Control Complex, National Centre for Diseases Control, Delhi with the technical team on air pollution from WHO headquarter, Geneva. The objective of this technical consultation was to discuss the tools required for assessing health impacts of air pollution.

The technical proceedings of the workshop were witnessed by Dr N.S. Dharamsaktu, Principal Advisor (Public Health), Ministry of health and Family Welfare, Delhi, India, Dr Inder Parkash,
Advisor (Public Health), Ministry of Health and Family Welfare, Delhi, India, Dr A.C. Dharwal, Director, National Centre for Diseases Control, Dr Prakin Suchaxaya, Coordinator Health Programmes, WHO Country Office, India, Dr Kasonde Mwinga, Team Leader (RMNACH), WHO, Ms Lesley Jane Onyon, Regional Advisor, WHO, India, Dr Sophie Pauline Gumy, Technical Officer, Interventions of Healthy Environments, WHO, Geneva; Ms Lesley Jane Onyon, Regional Advisor, WHO, India, Dr Sophie Pauline Gumy, Technical Officer, Interventions of Healthy Environments, WHO, Geneva; Mr Pierpaolo Mudu, Technical Officer, Interventions of Healthy Environments, WHO, Geneva; Mr Michal Krzyzanowski, Consultant & WHO Air Quality Expert, Dr Susan George K., Joint Director & Scientist-D, Ministry of Environment, Forest and Climate Change, Dr Geetika Yadav, Scientist-D, Non-Communicable Diseases, Indian Council of Medical Research, Delhi, India.

The focus of the workshop was sharing of knowledge, other countries’ experience and usage of software like AirQ+ and GreenS+. The salient point of discussions were,

a) awareness generation against ill-effects of air pollution on priority and in coordination with sectors working for it;

b) trends analysis to derive information on diseases occurrence, vulnerabilities and contributing factors;

c) Integrated Diseases Surveillance Programme should weekly examine the health data in respect of air pollution and also for identified ‘Hot Spots’;

d) collaborate with other sectors and ministries and link data from health, pollution and other sectors for immediate action;

e) other ministries to take appropriate actions like MoEFCC should enforce municipal acts in the cities. Agriculture ministry along with new and renewable ministry, Pollution control board etc should take appropriate actions to stop crop burning;

f) Exploration of ‘health risk assessment tool’ like AirQ+ or GreenS+ for various climate sensitive illnesses;

g) World Health Organization should help National Centre for Disease Control in establishment of ‘Standard Environment Laboratory’ by providing relevant equipment, capacity building of manpower.

(Contributed by Drs. Shikha Vardhan, DD & Jaikaran, DD)
Stakeholders meeting to review IHR self-assessment annual reporting tool

The Government of India is a signatory to the International Health Regulations, IHR (2005) which is an international legal instrument which aims to prevent, protect against, control and respond to international spread of disease while avoiding unnecessary interference with international travel and trade. It is our responsibility to develop core capacities as described in Annex 1 of IHR (2005). It is our obligation to report on progress made in IHR implementation annually to World Health Organization.

National Centre for Disease Control has been designated as National Focal Point for IHR (2005) in India. Since 2012, every year NCDC has been coordinating the compilation of responses on IHR self-assessment questionnaire and its submission to WHO. This year, WHO has modified the IHR State party self-assessment annual reporting tool. A meeting of stakeholders was held under the chairmanship of Director NCDC to review the IHR State party self-assessment annual reporting tool on 21 March, 2018 at NCDC. The meeting was attended by Shri Rajendra Chaudhary, AFFRO, Dr Deepak Sule DDG(IH), Dr P. Ravindran, Director EMR, Food Safety & Standards Authority of India, MoEF &CC, ICMR, NDMA, WHO Country Office & officials from NCDC. In the meeting the new IHR State Party self-assessment annual reporting tool was reviewed and suggestions were taken from the experts in the meeting. One of the key suggestions of the experts was to include “Research” under indicators/core capacity under IHR as it is currently not reflected in the core capacities. The meeting ended with vote of thanks to the chair.

(Contributed by NFP IHR Secretariat)

Entomological Survey of Vectors of Scrub Typhus in Haulawng, Lunglei District, Mizoram

Following reports of Scrub Typhus cases in Haulawng, Lunglei district, Mizoram an entomological investigation was conducted from 7 to 14th February, 2018 by a joint team from NCDC, Delhi and IDSP, Mizoram.

The objective of the survey was

- undertake joint rodent / vector mite surveillance in the areas from where scrub typhus cases have been reported earlier and
- detect the evidence of Orientia antibodies in rodent population if any.

A team from NCDC, Delhi visited the scrub typhus affected areas and an entomological survey was carried out to identify the vectors involved in the transmission of this disease. Survey was carried out in Haulawng and Zotui, Lunglei district, Mizoram.

Entomological survey comprised of laying of traps, collection of rodents, processing of rodents in the laboratory, dissection of rodents, mounting and identification of ectoparasites. A total of 45 traps were placed in four areas over the entire duration of the study. Three rodents were trapped from Haulawng village giving an overall rat positivity rate of 6.7%. It was observed that certain species, viz., *Rattus rattus* were the commoner ones encountered at Haulawng village. Total 37 vector larval trombiculid mite chigger (*Leptotrombidium deliense*) were collected from the rodents giving an overall chigger index as 12.33, which is above the critical index of 0.69 per rodent. Chigger infestation rate was found to be 18.5. The chigger infestation was found mainly on *Rattus rattus*. The flea index was also calculated as 1.33 which is more than critical index (index 1.0) for plague transmission. The investigation emphasized the importance of regular and continuous rodent surveillance to monitor the chigger/flea index. It was recommended that intensive health education be imparted to health officials and local masses about causation of disease, vector mites, it’s transmission cycle and seasonality, so that they can take preventive measures.
Assessment of prevalence and intensity of Soil Transmitted Helminthes among pregnant women and school children at Varanasi

Ascaris lumbricoides, Necator americanus/Ankylostoma duodenale and Trichuris trichura are among the most prevalent intestinal parasites worldwide. Approximately 4.5 billion individuals are at a risk and more than 1.5 billion people, or 24% of the world’s population, are reported to be infected with soil-transmitted helminthes (STH) infections worldwide. The global diseases burden caused by common STHs is estimated to be about 39 million DALY. Studies within South East Asia have shown a potential benefit of deworming on improving maternal anemia and reducing chances of low birth weight.

NCDC, Delhi along with its Branch at Varanasi has initiated a study to estimate the prevalence of STH among pregnant women. The study is expected to generate data for implementation of MoHFW guidelines on administration of Albendazole in 2nd trimester of ANC wherever quantum of STH related morbidity is significant among pregnant women.

(Dept. of Parasitic Disease)

Training courses for medical and veterinary professionals on Zoonotic Diseases of Public Health Importance

A three day National Level Joint orientation training workshop for medical and veterinary professionals was organized in NCDC Delhi from 29 - 31 January 2018 by Division of Zoonosis. The objective of the workshop was to develop core trainers both in medical and veterinary field on Zoonotic disease of public health importance. The training course was inaugurated by Dr Gyanendra Gongal, SEARO, WHO and Dr. A. C. Dhariwal, Director, NCDC, Delhi.

Training carries its importance in view of the diminishing boundaries between human and animal interface due to urbanization, deforestation and agriculture practice and growing threat of emerging and reemerging diseases. Need for Strengthening of intersectoral coordination at all levels for prevention and control of zoonotic diseases was also discussed.

Eminent faculty was invited from Indian Veterinary Research Institute Bareilly, Central Military veterinary laboratory, Meerut, World Health Organization, National Vector Borne Disease Control Programme etc.

The topics covered ranged from general concepts on Emerging and re-emerging zoonosis and disease specific zoonotic areas.

27 participants (Veterinary officer and Medical officer) of State Health Directorates from 9 states (Maharashtra, Manipur, Tamil Nadu, Uttar Pradesh, Uttarakhand, Delhi, Gujarat, Himachal Pradesh and Punjab) participated in the 3 day workshop.

The Global Initiative of “One Health” with an objective to enhance coordination of Health and Veterinary Sectors to meet the growing
challenges of Zoonotic Diseases was also stressed upon in the valedictory function presided by Dr N. S. Dharamshaktu, Principal Adviser, DGHS and Dr A. C. Dhariwal, Director, NCDC.

NCDC website gets a new look

A revamped user friendly NCDC website (www.ncdc.gov.in) was launched by Dr B.D. Athani, Director General of Health Services (DGHS), MoHFW on 22 March 2018 in a meeting at Nirman Bhavan, Delhi.

It was designed and developed by Centre for Health Informatics under MoHFW by modification of Content management system template of MoHFW website. Home Page, layout and design was finalised by NCDC Web Committee and content, various themes, banner and icons were also provided by NCDC.

The new website is built on dynamic web pages in open source technology, with user friendly content management system for easy navigation of contents along with utility features.
Ayushman Bharat: National Health Protection Mission

Ayushman Bharat, also known as the National Health Protection Scheme, has been approved by Union Cabinet on March 21, 2018 with budgetary support of Rs. 10,500 crore. The scheme is aimed at making path breaking interventions to address health holistically, in primary, secondary and tertiary care systems, covering both prevention and health promotion. Ayushman Bharat - National Health Protection Mission will be rolled out across all States/UTs in all districts with an objective to cover all the targeted beneficiaries in rural and urban areas.

The twin missions under the scheme are

(i) **Health and Wellness Centre**: Creating a network of health and wellness centres to deliver comprehensive primary healthcare, including for non-communicable diseases and maternal and child health services close to the community. The National Health Policy, 2017 has envisioned Health and Wellness Centres as the foundation of India’s health system. Under this **1.5 lakh centres** will bring health care system closer to the homes of people. These centres will also provide free essential drugs and diagnostic services. The Budget has allocated Rs.1200 crore for this flagship programme. Contribution of private sector through Corporate Social Responsibility and philanthropic institutions in adopting these centres is also envisaged.

The first 'Health and Wellness Centre' under Ayushman Bharat was inaugurated in Chhattisgarh's Bijapur district on April 14, 2018, on the occasion of Ambedkar Jayanti, by Hon'ble Prime Minister Shri Narendra Modi.

(ii) **National Health Protection Scheme**: Providing insurance cover to **40 per cent of India’s population** (over 10 Crore poor and vulnerable families based on Socioeconomic caste census (SECC) database), that is most deprived, for secondary and tertiary care, including hospitalization costs. It will subsume the on-going centrally sponsored schemes – Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).

**How it will impact health status of India?**

As per NSSO 2015, in-patient hospitalization expenditure in India has increased nearly 300% during last decade. Rural households primarily depended on their 'household income / savings' (68%) and on 'borrowings' (25%), the urban households relied much more on their 'income / saving' (75%) for financing expenditure on hospitalizations, and on (18%) borrowings. Out of pocket (OOP) expenditure in India is over 60% which leads to nearly 6 million families getting into poverty due to catastrophic health expenditures.

AB-NHPM will have major impact on **reduction of Out Of Pocket (OOP) expenditure** on ground of:

i. Increased benefit cover to nearly 40% of the population, (the poorest & the vulnerable).

ii. Covering almost all secondary and many tertiary hospitalizations. (except a negative list).

iii. Coverage of 5 lakh for each family, (no restriction of family size).

iv. All pre-existing conditions will be covered from day one of the policy.

v. The benefit cover will also include pre and post-hospitalization expenses.

vi. A defined transport allowance per hospitalization will also be paid to the beneficiary.

This will lead to **increased access to quality health and medication**. In addition, the unmet needs of the population which remained hidden due to lack of financial resources will be catered to. This will aid in timely treatments, improvements in health outcomes, patient satisfaction, improvement in productivity and
efficiency, job creation thus leading to improvement in quality of life.

**How will it be implemented?**

At the national level to manage, an **Ayushman Bharat National Health Protection Mission Agency (AB-NHPMA)** would be put in place. States/ UTs would be advised to implement the scheme by a dedicated entity called State Health Agency (SHA). They can either use an existing Trust/ Society/ Not for Profit Company/ State Nodal Agency (SNA) or set up a new entity to implement the scheme. States/ UTs can decide to implement the scheme through an insurance company or directly through the Trust/ Society or use an integrated model.

The beneficiaries can avail benefits in both public and empanelled private facilities. All public hospitals in the States implementing AB-NHPM will be deemed empanelled for the Scheme. Hospitals belonging to Employee State Insurance Corporation (ESIC) may also be empanelled based on the bed occupancy ratio parameter. As for private hospitals, they will be empanelled online based on defined criteria.

To control costs, the payments for treatment will be done on package rate (to be defined by the Government in advance) basis. The package rates will include all the costs associated with treatment. For beneficiaries, it will be a cashless, paper less transaction. Keeping in view the State specific requirements, States/ UTs will have the flexibility to modify these rates within a limited bandwidth.

For giving policy directions and fostering coordination between Centre and States, it is proposed to set up **Ayushman Bharat National Health Protection Mission Council (AB-NHPMC)** at apex level Chaired by Union Health and Family Welfare Minister. It is proposed to have an **Ayushman Bharat National Health Protection Mission Governing Board (AB-NHPMGB)** which will be jointly chaired by Secretary (HFW) and Member (Health), NITI Aayog with Financial Advisor, MoHFW, Additional Secretary & Mission Director, Ayushman Bharat National Health Protection Mission, MoHFW (AB-NHPM) and Joint Secretary (AB-NHPM), MoHFW as members. CEO, Ayushman Bharat - National Health Protection Mission will be the Member Secretary, State Secretaries of Health Department may also be members as per the requirement.

In order to ensure that the scheme reaches the intended beneficiaries and other stakeholders, a comprehensive media and outreach strategy will be developed, which will, inter alia, include print media, electronic media, social media platforms, traditional media, IEC materials and outdoor activities.

(Extracted from Press Information Bureau & india.gov.in)
**Disease Trends**

**Trend of enteric fever reporting under IDSP**

Enteric fever is an important public health challenge for India, especially with the spread of antimicrobial resistance. World Health Organization estimates that approximately 11–20 million people get sick from typhoid and between 128,000 and 161,000 people die from it every year. It remains as an important cause of avoidable mortality in regions without adequate access to safe water and sanitation.

IDSP undertakes surveillance of Enteric Fever in P (Presumptive Form) and confirmed Typhoid cases in L (Lab Confirmed Form).

Reporting of Enteric Fever has steadily improved & forecasting of trends has become better over the years.

![Enteric fever/typhoid cases and their outbreaks investigated in 2015-2017](image)

*Although it is required that lab diagnosis of Typhoid cases be done through culture, much of the cases reported in L-form are presently diagnosed through Widal Test.*

During 2017, the maximum number of probable cases were reported from Uttar Pradesh (1,173,542) followed by Karnataka (322,712) and Gujarat (242,032). Majority of the outbreaks were reported from Kerala (5) and Tamil Nadu (5) followed by Rajasthan (2), Karnataka (2) and Arunachal Pradesh (2) in 2017.

Modified case definitions for Enteric Fever and Typhoid are uploaded on IDSP website.

*(Contributed by Dr. Pranay Verma, DD & Mr. Prasun Sharma)*