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Women

1. Female Genital Mutilation (FGM)
Every year, February 6 is observed as the International Day of Zero Tolerance for Female Genital Mutilation (FGM).

What is Female Genital Mutilation?
It is the name given to procedures that involve altering or injuring the female genitalia for non-medical or cultural reasons, and is recognised internationally as a violation of human rights and the health and integrity of girls and women.
- Female genital mutilation (FGM) involves the partial or total removal of external female genitalia or other injury to the female genital organs for non-medical reasons.
- The practice has no health benefits for girls and women.
- FGM can cause severe bleeding and problems urinating, and later cysts, infections, as well as complications in childbirth and increased risk of newborn deaths.
- FGM is mostly carried out on young girls between infancy and age 15.

Types:
WHO classifies four types of FGM:
1. type 1 (partial or total removal of the clitoral glans).
2. type 2 (partial or total removal of the external and visible parts of the clitoris and the inner folds of the vulva).
3. type 3 (infibulation, or narrowing of the vaginal opening through the creation of a covering seal).
4. type 4 (picking, piercing, incising, scraping and cauterising the genital area).

Where is it practiced?
Most girls and women who have undergone FGM live in sub-Saharan Africa and the Arab States, but it is also practiced in some countries in Asia, Eastern Europe and Latin America. Countries where FGM is performed include Burkina Faso, Central African Republic, Chad, Democratic Republic of Congo, Sudan, Egypt, Oman, United Arab Emirates (UAE), Iraq, Iran, Georgia, Russian Federation, Colombia and Peru, among others.

2. Surrogacy (Regulation) Bill, 2020
Union Cabinet has approved the Surrogacy (Regulation) Bill, 2020.

Key features of the Bill:
- It allows any "willing" woman to be a surrogate mother and proposes that widows and divorced women can also benefit from its provisions, besides infertile Indian couples.
- The bill also proposes to regulate surrogacy by establishing National Surrogacy Board at the central level and, State Surrogacy Board and appropriate authorities in states and Union Territories respectively.
- The proposed insurance cover for surrogate mother has now been increased to 36 months from 16 months provided in the earlier version.
• **Commercial surrogacy will be prohibited** including sale and purchase of human embryo and gametes.

• **Ethical surrogacy** to Indian married couples, Indian-origin married couples and Indian single woman (only widow or divorcée between the age of 35 and 45 years) will be allowed on fulfilment of certain conditions.

### 3. Medical Termination of Pregnancy (Amendment) Bill, 2020

The **Medical Termination of Pregnancy (Amendment) Bill, 2020**, which seeks to amend the MTP Act, 1971, was passed in Lok Sabha recently.

**Key changes:**

- It seeks to **extend the upper limit for permitting abortions from 20 weeks to 24** under special circumstances.
- The “**special categories of women**” include rape survivors, victims of incest, the differently abled and minors.
- The Bill proposes requirement of opinion of one **registered medical practitioner (RMP)** for termination of pregnancy up to 20 weeks of gestation.
- It also provides for the requirement of opinion of two RMPs for termination of pregnancy of 20 to 24 weeks.
- **Constitution of a Medical Board:** The Bill states that the upper limit of termination of pregnancy will not apply in cases where such termination is necessary due to the diagnosis of substantial **foetal abnormalities**. These abnormalities will be diagnosed by a Medical Board. Every state government is required to constitute a Medical Board. These **Medical Boards will consist of the following members:** (i) a gynaecologist, (ii) a paediatrician, (iii) a radiologist or sonologist, and (iv) any other number of members, as may be notified by the state government.
- Under the Bill, if any pregnancy occurs as a result of failure of any device or method used by a woman or her partner to limit the number of children, such an **unwanted pregnancy** may constitute a grave injury to the mental health of the pregnant woman. The Bill amends this provision to replace ‘married woman or her husband’ with ‘woman or her partner’.
- **Protection of privacy of a woman:** The Bill states that no registered medical practitioner will be allowed to reveal the name and other particulars of a woman whose pregnancy has been terminated, except to a person authorised by any law. Anyone who contravenes this provision, will be punishable with imprisonment of up to one year, or with a fine, or both.
Health

1. All medical devices to be treated as ‘drugs’
   The central government had notified all medical devices as ‘drugs’, effective from April 1, bringing a range of products from instruments to implants to even software intended for medical use in human beings or animals under the purview of the Drugs and Cosmetics Act, 1940. At present, only 37 medical devices are notified as drugs. The health ministry made some amendments to the Medical Devices Rules, 2017.

   **Significance and implications of this move:**
   - Apart from expanding the scope of regulation to ensure safety and efficacy, the move may pave the way for regulation of prices under the Drugs Price Control Order (DPCO).
   - It will also make companies, in case of violations, liable to be penalised in a court of law.
   - Companies will now have to seek approval from the drug controller to manufacture, import and sell any medical device in the country.
   - Medical devices shall be registered with the Central Licensing Authority through an identified online portal established by the Central Drugs Standard Control Organisation (CDSCO). Such registration is voluntary for a period of 18 months, after which it will be mandatory.
   - The manufacturer of a medical device shall upload the information relating to that medical device for registration on the “Online System for Medical Devices” established by the CDSCO. Importers too will be required to do the same.

   **What is the “Drugs (Prices Control) Order (DPCO)”?**
   The Drugs Prices Control Order is an order issued by the Government of India under Sec. 3 of Essential Commodities Act, 1955 to regulate the prices of drugs. The Order interalia provides the list of price-controlled drugs, procedures for fixation of prices of drugs, method of implementation of prices fixed by Govt., penalties for contravention of provisions etc. For the purpose of implementing provisions of DPCO, powers of Govt. have been vested in the National Pharmaceutical Pricing Authority (NPPA).

   **Are all the drugs marketed in the country under price control?**
   No. The National List of Essential Medicines (NLEM) 2011 is adopted as the primary basis for determining essentiality, which constitutes the list of scheduled medicines for the purpose of price control. The DPCO 2013 contains more than 600 scheduled drug formulations spread across 27 therapeutic groups. However, the prices of other drugs can be regulated, if warranted in public interest.

   **Whether NPPA has any role to regulate prices of non-scheduled drugs?**
   The manufacturer of a non-scheduled drugs (drugs not under direct price control) is not required to take price approvals from NPPA for such drugs. However, NPPA is required to monitor the prices of such drugs and take corrective measures where warranted and their includes the power to fix and regulate such prices.

   **What is NPPA and its role?**
   National Pharmaceutical Pricing Authority (NPPA), was established on 29th August 1997 as an independent body of experts as per the decision taken by the Cabinet committee in September 1994 while reviewing Drug Policy. Functions: The Authority, interalia, has been entrusted with the task of fixation/revision of prices of pharmaceutical products (bulk drugs and formulations), enforcement of provisions of the Drugs (Prices Control) Order and monitoring of the prices of controlled and decontrolled drugs in the country.
2. Uniform Code of Pharmaceutical Marketing Practices (UCPMP)
Department of Pharmaceuticals (DoP) has yet again “requested companies to abide by Uniform Code of Pharmaceutical Marketing Practices (UCPMP)”.

Background:
There have been several instances of breach of the voluntary Uniform Code of Pharmaceutical Marketing Practices (UCPMP) by pharma companies. There has also been the demand from the Indian Medical Association (IMA) and doctors to make it mandatory.

What is UCPMP Code?
It is a voluntary code issued by the Department Of Pharmaceuticals relating to marketing practices for Indian Pharmaceutical Companies and as well medical devices industry.

Applicability: At present, the UCPMP Code is applicable on Pharmaceutical Companies, Medical Representatives, Agents of Pharmaceutical Companies such as Distributors, Wholesalers, Retailers, and Pharmaceutical Manufacturer’s Associations.

Key features and provisions:
- No gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised, to persons qualified to prescribe or supply drugs, by a pharmaceutical company or any of its agents.
- UCPMP Code prohibits extending travel facility inside the country or outside, including rail, air, ship, cruise tickets, paid vacations, etc., to HealthCare Professionals and their family members for vacation or for attending conference, seminars, workshops, CME programme etc. as a delegate. The Code also provides that free samples of drugs shall not be supplied to any person who is not qualified to prescribe such product. Meaning thereby that free samples can only be supplied to persons qualified to prescribe such product.
- It also prescribes additional conditions that are to be observed while providing samples.
- In order to appoint Medical Practitioners/HCPs as Affiliates there should be written contract, legitimate need for the services must be documented, and criteria for selecting affiliates must be directly related to the identified need.
- The UCPMP Code also provides that the number of affiliates retained must not be greater than the number reasonably necessary to achieve the identified need and that the compensation must be reasonable and reflect the fair market value of the services provided.

3. Centre stops online sale of medicines
Drugs Controller General of India (DCGI) has directed all states and Union territories to prohibit the sale of medicines through unlicensed online platforms as per the Delhi High Court order.

Background:
- The Delhi High Court in December 2018 had ordered the ban on sale of illegal or unlicensed online sale of medicines till the government drafts rules to regulate e-pharmacies.

How online pharmacies are currently operating in India?
- Online pharmacies are operating in the country without a drug licence as there are no rules framed for the sector.

Drugs and Cosmetics Act, 1940
- The Drugs and Cosmetics Act, 1940 is an Act of the Parliament of India which regulates the import, manufacture and distribution of drugs in India.
- The primary objective of the act is to ensure that the drugs and cosmetics sold in India are safe, effective and conform to state quality standards.
The related Drugs and Cosmetics Rules, 1945 contains provisions for classification of drugs under given schedules and there are guidelines for the storage, sale, display and prescription of each schedule.

Drugs Controller General of India (DCGI) is a department of the Central Drugs Standard Control Organization of the Government of India. It is responsible for approval of licences of specified categories of drugs such as blood and blood products, IV fluids, vaccines, and sera in India. Drug Controller General of India, comes under the Ministry of Health & Family Welfare. DCGI sets standards for manufacturing, sales, import, and distribution of drugs in India.

4. National Essential Diagnostics List (NEDL)
   - India has got its first National Essential Diagnostics List (NEDL) finalized by the Indian Council of Medical Research (ICMR).

   Key facts:
   - **Aim:** NEDL aims to bridge the current regulatory system’s gap that does not cover all the medical devices and in-vitro diagnostic device (IVD).
   - **Significance:** With this, India has become the first country to compile such a list that would provide guidance to the government for deciding the kind of diagnostic tests that different healthcare facilities in villages and remote areas require.
   - **Uses:** The list is meant for facilities from village till the district level.
   - NEDL builds upon the Free Diagnostics Service Initiative and other diagnostics initiatives of the Health Ministry to provide an expanded basket of tests at different levels of the public health system.

   Background:
   - In India, diagnostics (medical devices and in vitro diagnostics) follow a regulatory framework based on the drug regulations under the Drugs and Cosmetics Act, 1940 and Drugs and Cosmetics Rules 1945.

5. Fixed dose combinations (FDCs)
   - Fixed dose combinations (FDCs) were declared “irrational” by a Health Ministry expert committee set up in 2014.

   What are FDCs?
   - An FDC is a cocktail of two or more active drug ingredients in a fixed ratio of doses. According to US healthcare provider IMS Health, almost half the drugs sold in India in 2014 were FDC, making it a world leader in combination drugs.

   Why are they popular in India?
• FDCs’ popularity in India is due to advantages such as increased efficacy, better compliance, reduced cost and simpler logistics of distribution. FDCs have shown to be particularly useful in the treatment of infectious diseases like HIV, malaria and tuberculosis, where giving multiple antimicrobial agents is the norm. FDCs are also useful for chronic conditions especially, when multiple disorders co-exist.

6. Assisted Reproductive Technology (ART)
Assisted Reproductive Technology (ART), as commonly understood, comprises procedures such as in-vitro fertilisation (IVF), intra-uterine insemination (IUI), oocyte and sperm donation, cryopreservation and includes surrogacy as well.
The technology works to remove an egg from a woman’s body and fertilize it with a man’s sperm to make an embryo.
Social stigma of being childless and lengthy adoption processes have increased the demand for ART in India.

Cabinet clears Assisted Reproductive Technology Regulation Bill, aims to regulate IVF clinics.
Overview and key features of the Bill:
• It would lead to the creation of a national board to lay down and implement a code of conduct for people working at IVF clinics.
• Determines the minimum standards of physical infrastructure, laboratory, diagnostic equipment and expert manpower to be employed by ART clinics and banks.
• The bill intends to make genetic testing of the embryo mandatory before implantation for the benefit of the child born through ART.
• It also seeks to streamline the cryo-preservation processes for sperm, oocytes and embryo.
• It also proposes to constitute a national registry and registration authority to maintain a central database and assist the national board in its functioning.
• The bill proposes stringent punishment for those “practising sex selection, sale of human embryos or gametes and running agencies/rackets/organisations for such unlawful practices.

7. National Deworming Day
National Deworming Day is observed bi-annually on 10th February and 10th August in all states and UTs followed by mop-up activities.
• The National Deworming Day is a single fixed-day approach to treating intestinal worm infections in all children aged 1-19 years.
• It will mobilize health personnel, state governments and other stakeholders to prioritize investment in control of Soil Transmitted Helminth (STH) infections one of the most common infections.
• All the children are provided deworming tablet in schools and anganwadis. Besides the deworming tablet, various health promotion activities related to Water, Sanitation and Hygiene (WASH) are organised in schools and anganwadis.
The NDD program continues to reach crores of children and adolescents with deworming benefits through a safe medicine Albendazole.

Background:
- India carries the highest burden of worm infestation and 64% of Indian population less than 14 years of age are at risk of Soil Transmitted Helminths (STH) or worms' infestation.
- Soil Transmitted Helminths (STH) interfere with nutrients uptake in children; can lead to anaemia, malnourishment and impaired mental and physical development.

About Intestinal parasitic worms:
They are large multicellular organisms, which when mature can generally be seen with the naked eye. They are also known as Helminths. They are often referred to as intestinal worms even though not all helminths reside in the intestines.

Why this is a cause for concern?
Parasitic worms in children interfere with nutrient uptake, and can contribute to anaemia, malnourishment, and impaired mental and physical development. Parasitic worms have also debilitating consequences on the health and education of children, and on their long-term earning potential.

8. Kangaroo Mother Care (KMC)
Kangaroo Mother Care (KMC) is the intervention where babies are placed in skin-to-skin contact with their mothers and exclusively breast fed. It has been recommended worldwide for stable low-birthweight newborns.
WHO recommends that it be continued till baby attains a weight of 2.5 kg or till babies wriggle out.

KMC has 3 parts:
(1) Skin-to-skin contact
The more skin-to-skin contact between the baby’s front and the mother’s chest, the better. Skin-to-skin contact should ideally start at birth, but is helpful at any time. It should ideally be continuous day and night, but even shorter periods are still helpful.

(2) Exclusive breastfeeding
Direct suckling by the baby from the breasts is all that is needed for most mothers and babies. For very premature babies, expressing milk and addition of some essential nutrients may be needed.

(3) Support to the dyad
Whatever is needed for the medical, emotional, psychological and physical well being of mother and baby is provided to them, without separating them. This might mean adding ultramodern equipment if available, or purely intense psychological support in contexts with no resources. It can even mean going home very early.

Significance:
• The results recently published in *The Lancet* show that kangaroo mother care improved survival by 30% and 25%, in babies till 28 days and six months of age, respectively. *Such care for all infants with low birthweight could substantially reduce neonatal and infant mortality.*

• Kangaroo mother care benefits are much beyond preventing *hypothermia*. The care improves exclusive breast feeding, duration of breast feeding, and also reduces infections.

• It also promotes growth and development of the child and increases mother child bonding, and also reduces stress in both mother and baby.

9. **‘Eat right movement’ campaign**

*Western Railway’s Mumbai Central Terminus* became *India’s first Eat Right Station*. Food Safety & Standards Authority of India (FSSAI) has rated the station with four stars.

- The station was graded on the basis of food safety and hygiene, availability of healthy diet, food handling at preparation and food waste management among others.

- *‘Eat Right Station’ is a part of the ‘Eat Right India’* initiative that was launched by FSSAI in 2018 to help passengers make a healthy choice.

**About Eat Right Movement:**

It was *launched by the Food Safety and Standards Authority of India (FSSAI).* The movement aims to *cut down salt/sugar and oil consumption by 30% in three years.* It also aims to *engage and enable citizens* to improve their health and well-being by making the right food choices.

**Measures in place:**

FSSAI has put in place robust regulatory measures under three major pillars: *Eat Safe, Eat Health and Eat Sustainably for the programme.*

FSSAI has prescribed *a limit for Total Polar Compounds (TPC) at 25%* in cooking oil to avoid the harmful effects of reused cooking oil.

The Eat Right India movement acts as a *crucial preventive healthcare measure to trigger social and behavioural change* through a judicious mix of regulatory measures, combined with soft interventions for ensuring awareness and capacity building of food businesses and citizens alike.

**What is Eat Right Mela?**

As part of the Eat Right India movement, the ‘Eat Right Mela’ was conceived to engage, excite and enable citizens to eat right through an info-tainment model. Eat Right Melas have been envisioned for massive outreach to build awareness on safe food and healthy diets through an interactive and informative model.

10. **Breast Milk Banks**

**What are Breast Milk Banks?**

They are known as *Comprehensive Lactation Management Centres (CLMC) and Lactation Management Unit (LMU)*, depending on the level of health facilities where these units are established.


**Initiatives by India:**

- **MAA - "Mothers Absolute Affection":** A nationwide programme of the Ministry of Health and Family Welfare to promote breastfeeding.

- **Vatsalya – Maatri Amrit Kosh:** Established in collaboration with the Norwegian government.
11. World Alliance for Breastfeeding Action (WABA)

- Annually, WABA coordinates and organises the World Breastfeeding Week (WBW).
- World Alliance for Breastfeeding Action (WABA) is a global network of individuals and organisations dedicated to the protection, promotion and support of breastfeeding worldwide based on the Innocenti Declarations, the Ten Links for Nurturing the Future and the WHO/UNICEF Global Strategy for Infant and Young Child Feeding.
- WABA is in consultative status with UNICEF and an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC).

Breastfeeding is important because:

- It promotes better health for mothers and children alike.
- It prevents infections like diarrhoea and acute respiratory infections in early infancy and thus reduce infant mortality.
- It decreases the risk of mothers developing breast cancer, ovarian cancer, type 2 diabetes, and heart disease.
- It protects infants from obesity-related illnesses, diabetes and increases the IQ.

The correct norms of infant and young child feeding are:

- Initiation of Breastfeeding within an hour of birth.
- Exclusive breastfeeding for first six months of life i.e. only breast milk ‘NO’ other milk, food, drink or water.
- Appropriate and adequate complementary feeding from six months of age while continuing breastfeeding.
- Continued breastfeeding up to the age of two years or beyond.


Provisions of the bill:

- The Bill categorizes production, manufacture, import, export, transport, sale, distribution, storage, and advertisement of e-cigarettes and similar devices as cognizable offences.
- The bill stipulates that persons found in violation of the law for the first time will face a jail term of up to one year or a fine of up to one lakh rupees, or both. For subsequent offences, a jail term of up to three years and fine upto Rs 5 lakh.
• It further punishes storage of e-cigarettes with imprisonment up to six months or a fine of up to Rs 50,000, or both. Once the Bill comes into force, the owners of existing stocks of e-cigarettes will have to declare and deposit these stocks at the nearest office of an authorized officer.

Background:
• The Indian Council of Medical Research (ICMR) has recommended ‘complete’ ban on Electronic Nicotine Delivery Systems (ENDS), including e-cigarettes. The recommendation is based on currently available scientific evidence.

Why ICMR has recommended a complete ban?
• Addictive in nature: e-cigarettes and other such devices contained not only nicotine solution, that was highly addictive, but also harmful ingredients like flavoring agents and vaporisers. Availability of flavour variants and attractive designs are adding to allure of devices, and globally there was an increasing trend of e-cigarettes consumption among youth and adolescents.
• Use of ENDS or e-cigarettes can open a gateway for new tobacco addiction among the masses as on the balance, these have a negative impact on public health.
• Prolonged use of ENDS or e-cigarettes has documented adverse impact on humans which includes DNA damage, respiratory/cardiovascular/neurological Disorders, carcinogenic/cellular/molecular/immunological Toxicity and even have adverse effects on fetal development and pregnancy.
• Research has found that youths using e-cigarettes (or other such devices) are more likely to use regular cigarettes in later period. The exposure to ENDS increases the likelihood to experiment with regular products and increase intention to indulge in cigarette smoking.

What are e-cigarettes?
• An electronic cigarette (or e-cig) is a battery-powered vaporizer that mimics tobacco smoking. It works by heating up a nicotine liquid, called “juice.”
• Nicotine juice (or e-juice) comes in various flavors and nicotine levels. e-liquid is composed of five ingredients: vegetable glycerin (a material used in all types of food and personal care products, like toothpaste) and propylene glycol (a solvent most commonly used in fog machines.) propylene glycol is the ingredient that produces thicker clouds of vapor.
• Proponents of e-cigs argue that the practice is healthier than traditional cigarettes because users are only inhaling water vapor and nicotine.

Why its hard to regulate them?
• As e-cigarettes contain nicotine and not tobacco, they do not fall within the ambit of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA), which mandates stringent health warnings on the packaging and advertisements of tobacco products.

WHO report on e-cigarettes and effects:
• As per the report, Electronic Nicotine Delivery Systems (ENDS) (also known as e-cigarettes) emits nicotine, the addictive component of tobacco products. In addition to dependence, nicotine can have adverse effects on the development of the foetus during pregnancy and may contribute to cardiovascular disease.
• The WHO report further says that although nicotine itself is not a carcinogen, it may function as a “tumour promoter” and seems to be involved in the biology of malignant disease, as well as of neurodegeneration.
13. Recommended Dietary Allowance (RDA)
A laboratory analysis of most packaged and fast food items sold in India has revealed high salt and fat content, in violation of thresholds set by the Food Safety and Standards Authority of India (FSSAI).
The study found that much of **Recommended Dietary Allowance (RDA) is used (or exhausted) by eating these foods.**

**What is Recommended Dietary Allowance (RDA)?**
It is used to understand how much of any nutrient (salt, sugar, fat) should be consumed from different meals.
Most packaged foods fall in the ‘snack’ category and the RDA of this food is, therefore, a proportion of daily intake.

*It is influenced by:*
**Sex** – In general requirement is more for men than women.
**Age** – Adult men and women require nutrients for maintenance whereas infants and children require it for growth and maintenance. Nutrient requirements during childhood are proportional to growth rate.

14. Transfats
FSSAI launches ‘Trans-Fat Free’ logo.

**What are Trans fats?**
- Trans fatty acids (TFAs) or Trans fats are the most harmful type of fats which can have much more adverse effects on our body than any other dietary constituent.
- These fats are largely produced artificially but a small amount also occurs naturally. Thus in our diet, these may be present as Artificial TFAs and/or Natural TFAs.
- Artificial TFAs are formed when hydrogen is made to react with the oil to produce fats resembling pure ghee/butter.
- In our diet the major sources of artificial TFAs are the **partially hydrogenated vegetable oils (PHVO)/vanaspati/ margarine** while the natural TFAs are present in meats and dairy products, though in small amounts.

**Harmful effects:**
- TFAs pose a higher risk of heart disease than saturated fats. While saturated fats raise total cholesterol levels, TFAs not only raise total cholesterol levels but also reduce the good cholesterol (HDL), which helps to protect us against heart disease.
• Trans fats consumption increases the risk of developing heart disease and stroke.
• It is also associated with a higher risk of developing obesity, type 2 diabetes, heart disease, metabolic syndrome, insulin resistance, infertility, certain types of cancers and can also lead to compromised fetal development causing harm to the yet to be born baby.

Why they are increasingly being used?
TFA containing oils can be preserved longer, they give the food the desired shape and texture and can easily substitute ‘Pure ghee’. These are comparatively far lower in cost and thus add to profit/saving.

Permissible limit:
WHO recommendation: Limited to less than 1% of total energy intake. It has called for the total elimination of TFAs in global food supply by 2023.
FSSAI has proposed to limit TFA limit in foods to 2% and eliminate trans fats from foods by 2022.

15. Mental disorders high in South India
The study titled ‘burden of mental disorders across the States of India: Global Burden of Disease Study 1990-2017’. It has been conducted by Indian Council of Medical Research (ICMR) and Public Health Foundation of India (PHFI).

Why depression and anxiety high in South India?
The higher prevalence of depressive and anxiety disorders in southern States could be related to the higher levels of modernisation and urbanisation in these States and to many other factors that are not yet well understood.

What other mental health disorders?
Other notable mental health disorders in South Indian States were schizophrenia, bipolar disorder, idiopathic developmental intellectual disability (IDID), conduct disorder, autism spectrum disorders, eating disorders and attention deficit hyperactivity disorders (ADHD).

16. Maternal Mortality in India
A Special Bulletin on Maternal Mortality in India 2015-2017 from the Sample Registration System has been released.

Key facts:
• Maternal mortality ratio is measured as the number of maternal deaths per lakh live births.
• It varies among the Indian states from a high of 229 per lakh in Assam to a low of 42 in Kerala.
• Across the country, the maternal mortality ratio has declined from 130 during 2014-2016 to 122 during 2015-17.

According to the United Nations’ (UN) Sustainable Development Goals (SDGs), the global target is to bring down the MMR to fewer than 70 maternal deaths per 100,000 live births by 2030.

17. National Institute of Sowa-Rigpa (NISR)
The Union Cabinet had approved setting up of National Institute of Sowa-Rigpa (NISR) at Leh, Union Territory of Ladakh.
**Key facts:**
- It will be an autonomous national institute under the Ministry of AYUSH with the mandate to undertake interdisciplinary education and research programmes in Sowa-Rigpa in collaboration with national and international institutes.
- It will act as an apex institute for Sowa-Rigpa system. The existing Sowa-Rigpa institutions work under the Ministry of Culture.

**What is Sowa-Rigpa?**
- It is a traditional system of medicine practised in the Himalayan belt of India.
- It originated in Tibet and popularly practiced in countries namely, India, Nepal, Bhutan, Mongolia, and Russia.
- The majority of theory and practice of Sowa-Rigpa is similar to “Ayurveda”.
- Yuthog Yonten Gonpo from Tibet is believed to be the father of Sowa Rigpa.

The basic theory of Sowa-Rigpa may be adumbrated in terms of the following five points:
- The body in disease as the locus of treatment.
- Antidote, i.e., the treatment.
- The method of treatment through antidote.
- Medicine that cures the disease.
- Materia Medica, Pharmacy & Pharmacology.

**18. WHO India Country Cooperation Strategy 2019–2023**
*The WHO India Country Cooperation Strategy 2019–2023: A Time of Transition* has been launched.

**Overview of India CCS:**
1. The India CCS is one of the first that fully aligns itself with the newly adopted WHO 13th General Programme of Work and its ‘triple billion’ targets, the Sustainable Development Goals (SDGs) and WHO South-East Asia Region’s eight Flagship Priorities.
3. The CCS outlines how WHO can support the Ministry of Health & Family Welfare and other allied Ministries to drive impact at the country level.
4. The strategy document builds on other key strategic policy documents including India’s National Health Policy 2017, the many pathbreaking initiatives India has introduced — from Ayushman Bharat to its National Viral Hepatitis programme and promotion of digital health amongst others.

**What is Country Cooperation Strategy?**
- CCS provides a strategic roadmap for WHO to work with the Government of India towards achieving its health sector goals, in improving the health of its population and bringing in transformative changes in the health sector.
- It builds upon the work that WHO has been carrying out in the last several years.
- In addition, it identifies current and emerging health needs and challenges such as non-communicable diseases, antimicrobial resistance and air pollution.

**The four areas identified for strategic cooperation of WHO with the country encompass:**
- To accelerate progress on UHC.
- To promote health and wellness by addressing determinants of health.
- To protect the population better against health emergencies.
- To enhance India’s global leadership in health.
**WHO 'Triple Billion' targets:**
It is a strategic **plan for the next five years**.

**It aims for:**
- One billion more people to be benefitted from Universal Health Coverage (UHC)
- One billion more people to be protected from health emergencies
- One billion more people to be covered for better health and well-being.

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**19. INDIA IODINE SURVEY 2018-19 REPORT**

- **India Iodine Survey report** has been released.
- The survey was conducted by Nutrition International in collaboration with the AIIMS and the Indian Coalition for the Control of Iodine Deficiency Disorders (ICCIDD).
- The survey tested the iodine content in samples of cooking salt from households to estimate the coverage of iodised salt.
- Iodised salt is salt with at least 15 parts per million of iodine.

**Key findings:**
- Gujarat produces 71% of salt in the country, followed by Rajasthan at 17% and Tamil Nadu at 11%.
- 76.3% of Indian households consumed adequately iodised salt.
- Tamil Nadu (61.9%) has the lowest consumption of iodized salt despite being the third biggest producer of salt in the country.
- It is followed by Andhra Pradesh (63.9%), Rajasthan (65.5%), Odisha (65.8%) and Jharkhand (68.8%).
- Only 13 out of 36 States and UTs have achieved Universal Salt Iodisation or have 90% of households with access to adequately iodised salt.

**Significance of Iodised Salt:**
- Iodine is a **vital micro-nutrient** for optimal mental and physical development of human beings.
- Deficiency of iodine can result in a range of disabilities and disorders such as goitre, hypothyroidism, cretinism, abortion, still births, mental retardation and psychomotor defects.

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**20. Salmonella**

**What is Salmonella?**
- A group of **bacteria that can cause food-borne illnesses known as salmonellosis**.
- The World Health Organisation (WHO) identifies Salmonella as one of four key global causes of diarrhoeal diseases.

**Symptoms:**
- Nausea, diarrhoea, fever, and abdominal cramps 12-72 hours after contracting the infection.
- Usually, the illness lasts for 4-7 days, and most people recover without treatment.

**Who is more vulnerable?**
- According to the CDC, children under the age of 5 are at highest risk for Salmonella infection.
- Older adults and people with weakened immune systems too, are likely to have severe infections.

**Spread:**
- Salmonella bacteria are widely distributed in domestic and wild animals. They are prevalent in food animals such as poultry, pigs, and cattle, as well as in pets, including cats, dogs, birds, and turtles.
• Salmonella can pass through the entire food chain from animal feed, primary production, and all the way to households or food-service establishments and institutions.

21. NEW ANTI-TUBERCULOSIS DRUG
• U.S. Food & Drug Administration (FDA) has approved a new drug Pretomanid for treating drug-resistant tuberculosis — multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB).

Key facts:
• Pretomanid is only the third new anti-TB drug approved for use by FDA in more than 40 years.
• Pretomanid will be part of the three-drug regimen for drug approval by the European Medicines Agency (EMA).
• The duration of treatment for drug-resistant TB can be drastically cut from 18-24 months to just six-nine months when pretomanid drug is used along with two already approved drugs — bedaquiline and linezolid.
• The all-oral, three-drug regimen can also vastly improve the treatment success rate and potentially decrease the number of deaths due to better adherence to treatment.

How widespread is MDR-TB and XDR-TB?
• People with TB who do not respond to at least isoniazid and rifampicin, which are first-line TB drugs are said to have MDR-TB.
• People who are resistant to isoniazid and rifampin, plus any fluoroquinolone and at least one of three injectable second-line drugs (amikacin, kanamycin, or capreomycin) are said to have XDR-TB.
• As per the World Health Organisation’s Global Tuberculosis Report 2018, an estimated 4.5 lakh people across the world have MDR-TB and nearly 37,500 people have XDR-TB.

What is tuberculosis (TB)?
• It is a disease caused by bacteria that are spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine.
• In most cases, TB is treatable and curable; however, persons with TB can die if they do not get proper treatment.

How does drug resistance happen?
• Resistance to anti-TB drugs can occur when these drugs are misused or mismanaged. Examples include when patients do not complete their full course of treatment; when health-care providers prescribe the wrong treatment, the wrong dose, or length of time for taking the drugs; when the supply of drugs is not always available; or when the drugs are of poor quality.

22. Oxytocin Ban
• The final decision on whether the government can block private pharmaceutical companies from manufacturing and selling vital pregnancy drug oxytocin in India has been deferred, with the Supreme Court deciding the issue needs further deliberation.

• Oxytocin has also been dubbed the hug hormone, cuddle chemical, moral molecule, and the bliss hormone due to its effects on behavior, including its role in love and in female reproductive biological functions in reproduction.
• Oxytocin is a hormone that is made in the brain, in the hypothalamus. It is transported to, and secreted by, the pituitary gland, which is located at the base of the brain.
• It acts both as a hormone and as a brain neurotransmitter.
• The release of oxytocin by the pituitary gland acts to regulate two female reproductive functions: Childbirth and Breast-feeding.

Why is it vital?
• Oxytocin helps contract the uterus and induce delivery, control bleeding, and promote the release of breast milk. Its use is especially crucial to prevent new mothers from excessively bleeding after giving birth—a common cause of maternal deaths. According to an India sample registration scheme survey conducted in 2001-2003, postpartum hemorrhage accounted for 38 per cent of maternal deaths.

Reasons behind the ban are:
• Misuse in dairy industry: Oxytocin is a naturally-occurring hormone that causes uterine contractions during labour and helps new mothers lactate. However, the drug is misused in the dairy industry where livestock is injected with Oxytocin to make them release milk at a time convenient to farmers.
• Oxytocin is also used to increase the size of vegetables such as pumpkins, watermelons, eggplants, gourds, and cucumbers.

23. One Health Concept
• The World Organization of Animal Health, commonly known as OIE (an abbreviation of its French title), summarises the One Health concept as “human health and animal health are interdependent and bound to the health of the ecosystems in which they exist”.
• The philosophy of One Health recognizes inter-connectivity among human health, the health of animals, and the environment.

24. AWARE- A WHO TOOL FOR SAFER USE OF ANTIBIOTICS
• WHO launches tool for safer use of antibiotics, curb resistance- AWaRe.

About AWARe:
• It is an online tool aimed at guiding policy-makers and health workers to use antibiotics safely and more effectively.
• The tool, known as ‘AWaRe’, classifies antibiotics into three groups:
  o Access — antibiotics used to treat the most common and serious infections.
  o Watch — antibiotics available at all times in the healthcare system.
  o Reserve — antibiotics to be used sparingly or preserved and used only as a last resort.

25. E-2020 initiative
• Four countries from Asia — China, Iran, Malaysia and Timor-Leste — and one from Central America — El Salvador — reported no indigenous cases of malaria in 2018, according to the World Health Organization (WHO).
• The countries were part of the global health body’s E-2020 initiative, launched in 2016, working in 21 countries, spanning five regions, to scale up efforts to achieve malaria elimination by 2020.

What is the E-2020 initiative?
• In May 2015, the World Health Assembly endorsed a new Global Technical Strategy for Malaria 2016-2030, setting ambitious goals aimed at dramatically lowering the global malaria burden over this 15-year period, with milestones along the way to track progress. A key milestone for 2020 is the elimination of malaria in at least 10 countries that had the disease in 2015. To meet this target, countries must report zero indigenous cases in 2020.
• According to a WHO analysis published in 2016, 21 countries have the potential to eliminate malaria by 2020. They were selected based on an analysis that looked at the likelihood of elimination across 3 key criteria:
  o trends in malaria case incidence between 2000 and 2014;
  o declared malaria objectives of affected countries; and
  o informed opinions of WHO experts in the field.
• Together, these 21 malaria-eliminating countries are part of a concerted effort known as the E-2020 initiative, supported by WHO and other partners, to eliminate malaria in an ambitious but technically feasible time frame.

India (4 per cent) was among the five countries, the others being — Nigeria (25 per cent), Democratic Republic of the Congo (11 per cent), Mozambique (5 per cent), and Uganda (4 per cent) — that accounted for nearly 50 per cent of all malaria cases worldwide.

• Malaria is a life-threatening disease caused by *Plasmodium* parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable.
• Children aged under 5 years are the most vulnerable group affected by malaria.
• The WHO African Region carries a disproportionately high share of the global malaria burden. In 2018, the region was home to 93% of malaria cases and 94% of malaria deaths.
• **Vector control** is the main way to prevent and reduce malaria transmission.
• **Antimalarial medicines** can also be used to prevent malaria. For travellers, malaria can be prevented through chemoprophylaxis, which suppresses the blood stage of malaria infections, thereby preventing malaria disease.

The National Framework for Malaria Elimination (NFME) 2016-2030 outlines India’s strategy for elimination of the disease by 2030 synchronising with the Global Technical Strategy (GTS) for Malaria 2016-2030 of World Health Organisation (WHO).

26. Malaria Free Status
The World Health Organization (WHO) declared Algeria and Argentina as malaria-free, with no recorded cases of indigenous transmission of the disease since 2013 and 2010 respectively. To receive WHO certification, a country has to prove that it has interrupted indigenous transmission of the disease for at least three consecutive years.

World’s first vaccine against a parasitic disease: Mosquirix:
• RTS,S, known by its trade name Mosquirix, uses antibodies to target proteins presented by sporozoites (such as the circumsporozoite protein of falciparum) to enhance the immune system and help prevent the parasite from infecting the liver.
• Mosquirix is also engineered using a hepatitis B viral protein and a chemical adjuvant to further boost the immune response for enhanced effectiveness.

Durgama Anchalare Malaria Nirakaran (DAMaN) initiative:
• Among states, Odisha’s Durgama Anchalare Malaria Nirakaran (DAMaN) initiative is significant. The initiative aims to deliver services to the most inaccessible and hardest hit people of the State. The initiative has in-built innovative strategies to combat asymptomatic malaria.
• The programme is jointly implemented by Indian Council of Medical Research- National Institute of Malaria Research (ICMR-NIMR), National Vector Borne Disease Control Programme (NVBDCP), Odisha and Medicines for Malaria Venture (MMV).
Diseases

1. **Measles**
   India had helped the Maldives tackle a recent outbreak of measles. The Indian Embassy in Male recently handed over 30,000 doses of *measles and rubella (MR) vaccine* to the Maldivian Health Ministry.

   **About Measles:**
   *What is It? Measles is a highly contagious viral disease.* It remains an important cause of death among young children globally, despite the availability of a safe and effective vaccine.

   *Spread:* Measles is transmitted via droplets from the nose, mouth or throat of infected persons.

   *Initial symptoms,* which usually appear 10–12 days after infection, include high fever, a runny nose, bloodshot eyes, and tiny white spots on the inside of the mouth. Several days later, a rash develops, starting on the face and upper neck and gradually spreading downwards.

   *Vulnerability:* Severe measles is more likely among poorly nourished young children, especially those with insufficient vitamin A, or whose immune systems have been weakened by HIV/AIDS or other diseases.

   The most serious complications include blindness, encephalitis (an infection that causes brain swelling), severe diarrhoea and related dehydration, and severe respiratory infections such as pneumonia.

   **Prevention:** Routine measles vaccination for children, combined with mass immunization campaigns in countries with low routine coverage, are key public health strategies to reduce global measles deaths.

   **Preventive efforts:**
   Under the *Global Vaccine Action Plan,* measles and rubella are targeted for elimination in five WHO Regions by 2020. WHO is the lead technical agency responsible for coordination of immunization and surveillance activities supporting all countries to achieve this goal.

   **What is Rubella?**
   Also called *German Measles,* Rubella is a contagious, generally mild viral infection that occurs most often in children and young adults.

2. **WHO SOUTH-EAST ASIA REGION PLANS TO BANISH MEASLES, RUBELLA BY 2023**
   Member-countries of the World Health Organisation (WHO) South-East Asia Region have resolved to eliminate highly infectious childhood killer diseases measles and rubella by 2023.

   A resolution to eliminate the diseases was adopted at the 72nd session of the WHO Regional Committee for South-East Asia in Delhi.

3. **H1N1 infection**
   *What is Swine flu (H1N1)?* 
   Also called as pig influenza, swine flu, hog flu and pig flu.

   It is an infection caused by any one of several types of swine influenza viruses.

   Swine influenza virus is any strain of the influenza family of viruses that is endemic in pigs.
Influenza A (H1N1) virus is the subtype of influenza A virus that is the most common cause of human influenza. It is an orthomyxovirus that contains the glycoproteins haemagglutinin and neuraminidase.

- Haemagglutinin causes red blood cells to clump together and binds the virus to the infected cell.
- Neuraminidase is a type of glycoside hydrolase enzyme which helps to move the virus particles through the infected cell and assist in budding from the host cells.

Spread and Effects:
- H1N1 influenza (or swine flu) is a highly contagious acute respiratory disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs.
- Swine flu viruses do not normally infect humans. However, sporadic human infections with swine flu have occurred.
- Most commonly, these cases occur in people with direct exposure to pigs (e.g., children near pigs at a fair or workers in the swine industry).
- However, there have been cases of human-to-human spread of swine flu.
- The sub-types are based on: The host of the origin, Geographical origin, Strain in number, Year of isolation etc.

Spreading of Seasonal Influenza (H1N1):
- Seasonal influenza viruses circulate and cause disease in humans every year.
- In tropical climates, disease tends to occur seasonally as well as regular virus spreading from person-to- person through sneezing, coughing, or touching contaminated surfaces.
- Seasonal influenza viruses evolve continuously, which means that people can get infected multiple times throughout their lives.

Diagnosis and treatment:
- The Centres for Disease Control and Prevention recommend real-time polymerase chain reaction as the method of choice for diagnosing H1N1.
- Antiviral drugs are the mainstay of clinical treatment of swine influenza and can make the illness milder and enable the patient to feel better faster.
- Prevention of swine influenza has 3 components: prevention in swine, prevention of transmission to humans, and prevention of its spread among humans.
- Because of limited treatment options, high risk for secondary infection, and frequent need for intensive care of individuals with H1N1 pneumonia, environmental control, including vaccination of high-risk populations and public education are critical to control of swine influenza outbreaks.

4. H9N2
Indian scientists have detected the country’s first case of infection with a rare variant of the virus- H9N2- that causes avian influenza, or bird flu.

www.insightsonindia.com 22 www.insightsactivelearn.com
**About H9N2:**

H9N2 is a subtype of the influenza A virus, which causes human influenza as well as bird flu. The H9N2 subtype was isolated for the first time in Wisconsin, US in 1966 from turkey flocks. H9N2 viruses are found worldwide in wild birds and are endemic in poultry in many areas. The H9N2 influenza virus can be transmitted by air droplet, dust, feed, or water.

**Threats and concerns:**

H9N2 viruses could potentially play a major role in the emergence of the next influenza pandemic. According to the World Health Organization (WHO), with avian influenza viruses circulating in poultry, there is a risk for sporadic infection and small clusters of human cases due to exposure to infected poultry or contaminated environments. Therefore, sporadic human cases are not unexpected.

5. **Classical Swine Fever (CSF)**

The Indian Institute of Veterinary Research (IVRI) of the Indian Council of Agricultural Research (ICAR) has developed a new vaccine to control classical swine fever.

**About the vaccine and its significance:**

It is a live attenuated CSF cell culture vaccine (indigenous strain). The indigenously developed vaccine will help in saving rabbits as the currently used vaccine (lapinized CSF vaccine) is produced by sacrificing large numbers of rabbits. Besides, the new vaccine gives immunity for two years as compared to 3 to 6 months protection under the currently used vaccines. The new vaccine will be a part of the government’s One Health Initiative.

**What is Classical Swine Fever (CSF)?**

Hog Cholera or Classical swine fever (CSF) is a contagious viral disease of domestic and wild swine. It happens due to the viruses that bring viral diarrhea in pigs and ailments in sheep. The disease does not harm humans but all-important precautions are advised to follow.

6. **Neglected diseases**

January 30, 2020 was the first-ever World Neglected Tropical Diseases Day (World NTD Day), a day to celebrate the achievements made towards control of the world's NTDs, yet recognize the daunting challenges we face in the control and elimination of these conditions.

**Policies on neglected diseases research in India:**

- The National Health Policy (2017) sets an ambition to stimulate innovation to meet health needs and ensure that new drugs are affordable for those who need them most, but it does not specifically tackle neglected diseases.
- The National Policy on Treatment of Rare Diseases (2018) includes infectious tropical diseases and identifies a need to support research on treatments for rare diseases. It has not yet prioritised diseases and areas for research funding or how innovation would be supported.

**Why are some tropical diseases called “neglected”?**

The people who are most affected by these diseases are often the poorest populations, living in remote, rural areas, urban slums or conflict zones. Neglected tropical diseases persist under conditions of poverty and are concentrated almost exclusively in impoverished populations in the developing world.
Spread:
- Infections are caused by unsafe water, poor housing conditions and poor sanitation.
- Children are the most vulnerable to these diseases, which kill, impair or permanently disable millions of people every year, often resulting in life-long physical pain and social stigmatization.

Control:
Many neglected tropical diseases can be prevented, eliminated or even eradicated with improved access to existing safe and cost-effective tools. Control relies on simple interventions that can be carried out by non-specialists — for example schoolteachers, village heads and local volunteers — in community-based preventive action.

7. Rare Diseases
The Union Ministry of Health and Family Welfare has published a national policy for the treatment of 450 ‘rare diseases’.

The Centre first prepared such a policy in 2017 and appointed a committee in 2018 to review it.

Overview of the policy:
- The policy intends to kickstart a registry of rare diseases, which will be maintained by the Indian Council of Medical Research (ICMR).
- According to the policy, rare diseases include genetic diseases, rare cancers, infectious tropical diseases, and degenerative diseases.
- Under the policy, there are three categories of rare diseases — requiring one-time curative treatment, diseases that require long-term treatment but where the cost is low, and those needing long-term treatments with high cost. Some of the diseases in the first category include osteopetrosis and immune deficiency disorders, among others.
- As per the policy, the assistance of Rs 15 lakh will be provided to patients suffering from rare diseases that require a one-time curative treatment under the Rashtriya Arogya Nidhi scheme. The treatment will be limited to the beneficiaries of Pradhan Mantri Jan Arogya Yojana.

Background:
The policy was created on the direction of the Delhi High Court to the Ministry of Health and Family Welfare.

What is a rare disease?
A rare disease, also referred to as an orphan disease, is any disease that affects a small percentage of the population.

- Most rare diseases are genetic, and are present throughout a person’s entire life, even if symptoms do not immediately appear.

Characteristics:
- Rare diseases are characterised by a wide diversity of symptoms and signs that vary not only from disease to disease but also from patient to patient suffering from the same disease. Relatively common symptoms can hide underlying rare diseases, leading to misdiagnosis.
- The most common rare diseases recorded in India are Haemophilia, Thalassemia, sickle-cell anaemia and primary immuno deficiency in children, auto-immune diseases, Lysosomal storage disorders such as Pompe disease, Hirschsprung disease, Gaucher’s disease, Cystic Fibrosis, Hemangiomas and certain forms of muscular dystrophies.

Definition:
While there is no universally accepted definition of rare diseases, countries typically arrive at their own descriptions, taking into consideration disease prevalence, its severity and the existence of alternative therapeutic options. In the US, for instance, a rare disease is defined as a condition that affects fewer than 200,000 people. The same definition is used by the National Organisation for Rare Disorders (NORD).

**Concerns and challenges:**
- Rare diseases pose a significant challenge to health care systems because of the difficulty in collecting epidemiological data, which in turn impedes the process of arriving at a disease burden, calculating cost estimations and making correct and timely diagnoses, among other problems.
- Many cases of rare diseases may be serious, chronic and life-threatening. In some cases, the affected individuals, mostly children, may also suffer from some form of a handicap.

**8. Yada Yada virus**
Detected recently in Australian mosquitoes.
- It belonged to a group that includes other alphaviruses such as chikungunya virus and the astern equine encephalitis.
- Even so, the novel virus poses no threat to human beings, because it is a part of a group of viruses that only infect mosquitoes. Other viruses in the same group include the Tai forest alphavirus and the Agua Salud alphavirus.

**9. Hemorrhagic septicemia**
- It is a severe bacterial disease caused by certain strains.
- The disease is also spread through contact with infected animals, contaminated clothing, equipment, and through ingestion or inhalation of the bacteria.
- **Primary symptoms** include swishing tails, reduced cudding, undigested food in faeces and reduced milk yield.

*Why in News?* Around 40 buffaloes had died within four days due to suspected Sahana disease (hemorrhagic septicemia) in a number of villages located in the Garadapur block of Odisha’s Kendrapara.

**10. Pigmentary disorder**
**What is pigmentary disorders? Their effects?**
Physiological pigmentation is a critical defense mechanism by which skin is protected against harmful UV radiations. Inefficient pigmentation predisposes to skin cancers, which are one of the leading causes of cancer-associated deaths worldwide.

Pigmentary disorders result from a problem with melanin, a pigment produced by melanocytes that helps determine the color of the skin, hair, and eye iris. Increased melanin causes darker pigmentation, whereas decreased or missing melanin causes a lighter or white appearance. Pigmentary disorders mostly affect the skin – those that affect the hair and iris are rarer.

Further, pigmentary disorders (both hypo and hyper pigmentary) are considered a social stigma and therefore they impart long-term psychological trauma and tremendously hamper mental well-being of patients.

**11. Rotavirus**
Vice- President has launched the new rotavirus vaccine – ROTAVACSD.
The vaccine has been designed and developed by Bharat Biotech.
**About Rotavirus:**
It is a *genus of double-stranded RNA virus in the Reoviridae family.*
Rotavirus is a leading *cause of severe diarrhoea and death among children less than five years of age.*
It is responsible for around 10% of total child mortality every year.

**Rotavirus—Signs and Symptoms:**
- Kids with a rotavirus infection have fever, nausea, and vomiting, often followed by abdominal cramps and frequent, watery diarrhea.
- Kids may also have a cough and runny nose.
- Sometimes the diarrhea that accompanies a rotavirus infection is so severe that it can quickly lead to dehydration.
- As with all viruses, though, some rotavirus infections cause few or no symptoms, especially in adults.

**Transmission:**
Rotavirus is transmitted by the *faecal-oral route*, via contact with contaminated hands, surfaces and objects, and possibly by the respiratory route. Viral diarrhea is highly contagious.

**Background:**
Out of all the causes of diarrhoea, rotavirus is a leading cause of diarrhoea in children less than 5 years of age. *Rotavirus diarrhoea presents in similar manner like any other diarrhoea but can mainly be prevented through rotavirus vaccination.*
Other diarrhoea can be prevented through general measures like good hygiene, frequent hand washing, safe water and safe food consumption, exclusive breastfeeding and vitamin A supplementation.

**12. Lymphatic Filariasis**
*National Symposium on Lymphatic Filariasis* was held in India on the theme ‘*United to Eliminate Lymphatic Filariasis*’.

**Lymphatic filariasis:**
Also called as *elephantiasis*, it is Caused by infection with *parasitic worms* living in the lymphatic system. The larval stages of the parasite (microfilaria) circulate in the blood and are *transmitted from person to person by mosquitoes.*
May Cause *abnormal enlargement of body parts, and leading to severe disability and social stigmatization of those affected.*
The *parasites are transmitted by four main types of mosquitoes*: Culex, Mansonia, Anopheles and Aedes.

**Triple drug therapy:**
The *World Health Organization (WHO)* is recommending *three drug treatment* to accelerate the global elimination of lymphatic filariasis.
• The treatment, known as IDA, *involves a combination of ivermectin, diethylcarbamazine citrate and albendazole.*
• The plan is to administer these drugs for two consecutive years. The life of the adult worm is hardly four years, so it would die a natural death without causing any harm to the person.

Since 2004, two drug therapy for lymphatic filariasis has been in place but the addition of the third drug now will give a boost to the overall campaign. *India has missed earlier deadlines to eradicate the disease by 2015 and 2017. The global deadline now is 2020* and the three-drug approach may help the country get there.

**Global Alliance to Eliminate Lymphatic Filariasis:**
It is an alliance of partners from 72 LF endemic national country programmes, NGOs, private sectors, academic and research institutes and international development agencies that assists WHO’s Global Programme to Eliminate Lymphatic Filariasis.

**13. Alzheimer’s disease**

What is Alzheimer’s?
• It is a progressive brain disorder that typically affects people older than 65. When it affects younger individuals, it is considered early onset.
• The disease destroys brain cells and nerves, and disrupts the message-carrying neurotransmitters.
• Eventually, a person with Alzheimer’s loses the ability to perform day-to-day activities.

**Symptoms include** memory loss, difficulty in completing familiar tasks, confusion with time or place, problems in speaking and writing, decreased or poor judgment, and changes in mood and personality. *Alzheimer’s disease is also the most common cause of dementia — which is a syndrome and not a disease in itself,* and whose symptoms include loss of memory, thinking skills, problems with language, changes in mood and deterioration in behaviour.

**Treatment:**
There is no cure for Alzheimer’s, because its exact causes are not known. Most drugs being developed try to slow down or stop the progression of the disease.
• There is a degree of consensus in the scientific community that Alzheimer’s involves two proteins, called beta amyloids and tau. When levels of either protein reach abnormal levels in the brain, it leads to the formation of plaque, which gets deposited between neurons, damaging and disrupting nerve cells.
• Most existing drugs for Alzheimer’s try to target these proteins to manage some of the symptoms of Alzheimer’s.
14. Pneumonia

The World Health Organisation (WHO) identifies pneumonia as the single largest cause of death in children worldwide.

Every year, it kills an estimated 1.4 million children under the age of five years, accounting for 18% of all deaths of children under five years old worldwide, according to the WHO. This, despite pneumonia being preventable and treatable.

How is it spread?

Infectious agents may include bacteria, viruses and fungi. Streptococcus pneumoniae is the most common cause of bacterial pneumonia in children, and Haemophilus influenzae type b (Hib) is the second most common cause of bacterial pneumonia. Respiratory syncytial virus is the most common viral cause of pneumonia. Air sacs in an infected individual’s lungs (alveoli) become inflamed due to deposits of fluid and pus, making it painful and difficult for them to breathe.

Children and the elderly above the age of 65 years are especially vulnerable.

What are the symptoms of infection?

Symptoms include high fever and chills, cough with phlegm, physical weakness and a feeling of being unwell, shortness of breath and rapid breathing, and a racing pulse.

How can it be prevented and treated?

Preventive measures include maintaining hygiene and getting vaccinations against certain pneumonia causing bacteria.

Saving a child from pneumonia requires urgent treatment, that usually involves the administration of antibiotics, which typically do not cost much. On average, treatment lasts for about five to seven days.

15. Plague

The plague is a disease caused by the bacteria Yersinia pestis, which is found in animals, particularly rodents.

It can be transmitted to humans through infected animals and fleas.

In the Middle Ages (5th-15th century), plague was also known as the ‘Black Death’ as it was responsible for the deaths of millions of people in Europe.

There are three types of plague:

- **Bubonic plague:** This infects a person’s lymphatic system (which is a part of their immune system), causing inflammation in the lymph nodes. If left untreated, the bubonic plague can also convert into either pneumonic or septicemic plague. Its symptoms include fever, chills, weakness and headaches.

- **Pneumonic plague:** According to WHO, pneumonic plague is the ‘most virulent form of plague’ and can be fatal within 24 to 72 hours. It occurs when the bacteria infects the lungs. It is the only type of plague that can be transmitted from human to human. Symptoms are chest pain, fever and cough. It is highly contagious and transmissible merely by coughing.

- **Septicemic plague:** This is when the bacteria enters the blood stream and multiplies there.

If left untreated, pneumonic and bubonic plague can lead to septicemic plague. A person infected by septicemic plague may also notice their skin turning black.
How to treat and control plague?
The plague is a life-threatening disease but if caught early, can be treated with antibiotics. However, without prompt treatment, the disease can lead to serious illnesses and even death. At times, antibiotics alone are not enough — additionally intravenous fluids and extra oxygen are required to treat a person.
Since it is highly contagious, those who are infected with pneumonic plague are kept in isolation. And people in close contact with the person infected are given a dose of antibiotics as a preventive measure.

Other preventive measures to curb a plague outbreak are to keep the rodent population in control with pest control measures, ensuring that surrounding areas are clear of stacks of wood that rodents feed on among others.

16. National Health Profile, 2019
National Health Profile, 2019 has been released by the Central Bureau of Health Intelligence (CBHI). This is the 14th edition.

What is NHP?
Prepared by the Central Bureau of Health Intelligence (CBHI). Covers comprehensive information on demographic, socio-economic health status, health finance indicators, health infrastructure and health of human resources in the country.
Objective: To create a versatile database of health information and making it available to all stakeholders in the healthcare sector.

The NHP highlights substantial health information under major indicators:
- Demographic indicators (population and vital statistics).
- Socio-economic indicators (education, employment, housing and amenities, drinking water and sanitation).
- Health status indicators (incidence and prevalence of common communicable and non-communicable diseases and RCH), etc.
- The health finance indicators provides an overview of health insurance and expenditure on health, both public and Out of Pocket Expenditure (OOP), etc.
- Human resources provides an overview of availability of manpower working in the health sector.
- Health infrastructure section provides details of medical and dental colleges, AYUSH institutes, nursing courses and paramedical courses, etc.

Key findings:
- Life expectancy in India has increased from 49.7 years in 1970-75 to 68.7 years in 2012-16. life expectancy for females is 70.2 years and 67.4 years for males.
- Diabetes and hypertension rate are high among Indians while dengue and chikungunya are a cause of great concern to public health.
- Highest population density of 11,320 people per square kilometre was reported by the National Capital Territory of Delhi (NCT) whereas Arunachal Pradesh reported the lowest population density of 17.
- High incidence in the young and economically active population.

There has been consistent decrease in the birth rate, death rate and natural growth rate in India since 1991 to 2017.
17. Rheumatic fever
The government is planning on the revival of *Penicillin in a bid to fight against drug resistance and to tackle rheumatic heart disease.*

**Penicillin:**
- Penicillin is one of the oldest antibiotics known to man and is still effective in many cases as not many organisms have developed resistance to it yet.
- Discovered in 1928.
- Penicillin went out of production in India as a result of unrealistic price control.

**What is Rheumatic fever?**
- It is endemic in India.
- It remains to be one of the major causes of the cardiovascular disease which accounts for nearly 25 to 45 per cent of acquired heart disease.
- Though, not all sore throats become rheumatic fever with severe joint pain or end up in rheumatic heart disease.
- Rheumatic heart disease is a condition in which the heart is affected by a disease that eventually leaves no option but to replace the heart valves.

18. Anthrax
*Anthrax* scare at Assam’s *Pobitora sanctuary* after death of 2 buffaloes *Asiatic Water Buffaloes.*

**What is anthrax?**
A disease caused by *Bacillus anthracis*, a germ that lives in soil.

**Affects animals** such as cattle, sheep, and goats more often than people. *People can get anthrax from contact with infected animals, wool, meat, or hides.*

**Spread:** It does not spread directly from one infected animal or person to another; it is spread by spores. These spores can be transported by clothing or shoes.

**Symptoms & Infection:**
**Respiratory infection** in humans initially presents with cold or flu-like symptoms for several days, followed by pneumonia and severe (and often fatal) respiratory collapse.

**Gastrointestinal (GI) infection** in humans is most often caused by consuming anthrax-infected meat and is characterized by serious GI difficulty, vomiting of blood, severe diarrhea, acute inflammation of the intestinal tract, and loss of appetite.

Cutaneous anthrax, also known as *Hide porter’s disease*, is the cutaneous (on the skin) manifestation of anthrax infection in humans.

**Treatment:**
- The standard treatment for anthrax is a 60-day course of an antibiotic. Treatment is most effective when started as soon as possible.
- Although some cases of anthrax respond to antibiotics, advanced inhalation anthrax may not. By the later stages of the disease, the bacteria have often produced more toxins than drugs can eliminate.

**Use in Bioterrorism:**
Anthrax has been used in biological warfare by agents and by terrorists to intentionally infect.

**Facts for prelims:**
*Pobitora Wildlife Sanctuary* has the highest concentration of one-horned rhinos in the world. *Asiatic water buffalo* is the state animal of Chhattisgarh.
Asian buffalo is a large bovine native to the Indian Subcontinent and Southeast Asia. It has been listed as Endangered in the IUCN Red List since 1986, as the remaining population totals less than 4,000.

19. Hepatitis B
- On September 3, 2019, Bangladesh, Bhutan, Nepal, and Thailand became the first four countries in the World Health Organization’s southeast Asia region to have successfully controlled hepatitis B.
- The virus is said to be controlled when the disease prevalence is reduced to less than 1% among children less than five years of age.

India’s scenario:
- Despite the introduction of hepatitis B vaccine in the Universal Immunisation Programme in 2002 and scaling-up nationwide in 2011, about one million people in India become chronically infected with the virus every year.

What is hepatitis?
- Hepatitis means inflammation of the liver. When the liver is inflamed or damaged, its function can be affected.
- Causes: Heavy alcohol use, toxins, some medications, and certain medical conditions can all cause hepatitis. However, hepatitis is often caused by a virus. In the United States, the most common hepatitis viruses are hepatitis A virus, hepatitis B virus, and hepatitis C virus.

What is the difference between hepatitis A, hepatitis B, and hepatitis C?
- Hepatitis A, Hepatitis B, and Hepatitis C are liver infections caused by three different viruses.
- Hepatitis A is usually a short-term infection and does not become a long-term infection.
- Hepatitis B and hepatitis C can also begin as short-term infections but in some people, the virus remains in the body, and causes chronic, or lifelong, infection.
- There are vaccines to prevent hepatitis A and hepatitis B; however, there is no vaccine for hepatitis C.

How is hepatitis B spread?
- The hepatitis B virus is spread when blood, semen, or other body fluid infected with the hepatitis B virus enters the body of a person who is not infected.

20. Foot-and-mouth disease
- Prime Minister Narendra Modi launched the National Animal Disease Control Programme (NACDP) to control and eradicate the Foot & Mouth Disease (FMD) and Brucellosis amongst the livestock in the country.
- It aims to control Foot and Mouth Disease and Brucellosis by 2025 with vaccination and eventual eradication by 2030.

Objectives of the programme:
- To Vaccinate more than 500 Million Livestock including cattle, buffalo, sheep, goats and pigs against Foot and Mouth Disease (FMD).
- To Vaccinate 36 Million Female Bovine Calves annually in its fight against Brucellosis disease.

Funding:
- 100% funding from Central Government, of Rs.12,652 Crores for a period of 5 years till 2024.

About Foot-and-mouth disease:
- It is an infectious and sometimes fatal viral disease.
- Affects cloven-hoofed animals, including domestic and wild bovids.
- Symptoms: The virus causes a high fever for two or three days, followed by blisters inside the mouth and on the feet that may rupture and cause lameness.
- The virus responsible for the disease is a picornavirus, the prototypic member of the genus Aphthovirus.

Spread of the disease and Concerns associated:
- Foot-and-mouth disease (FMD) has severe implications for animal farming, since it is highly infectious and can be spread by infected animals through aerosols, through contact with contaminated farming equipment, vehicles, clothing, or feed, and by domestic and wild predators.

Can Humans be affected?
- Humans can be infected with foot-and-mouth disease through contact with infected animals, but this is extremely rare. Some cases were caused by laboratory accidents. Because the virus that causes FMD is sensitive to stomach acid, it cannot spread to humans via consumption of infected meat, except in the mouth before the meat is swallowed. Symptoms of FMD in humans include malaise, fever, vomiting, red ulcerative lesions (surface-eroding damaged spots) of the oral tissues, and sometimes vesicular lesions (small blisters) of the skin.

21. Canine Distemper Virus (CDV)
- A recent study published in Threatened Taxa notes that 86% of the tested dogs around Ranthambore National Park in Rajasthan carried Canine Distemper Virus (CDV) antibodies in their bloodstream.
- This means that the dogs are either currently infected or have been infected sometime in their life and have overcome the disease. This finding points out that there is an increased risk of disease transfer from the dogs to tigers and leopards that live in the park.

Background:
- In 2018 over 20 lions from the Gir forest succumbed to the viral infection and now a guideline has been prepared by the National Tiger Conservation Authority to prevent the spillover of the disease to wild animals.

What is Canine Distemper Virus?
- Canine Distemper Virus (CDV) is a viral disease that infects the gastrointestinal, respiratory, and central nervous systems.

Spread:
- Dogs who have not been vaccinated for Canine Distemper are the most at-risk. While the disease can also be contracted when improperly vaccinated or when a dog has high susceptibility to bacterial infection, these cases are rare.
- CDV can be spread through direct contact (licking, breathing air, etc.) or indirect contact (bedding, toys, food bowls, etc.), though it cannot live on surfaces for very long. Inhaling the virus is the primary method of exposure. There is no known cure for CDV.
22. **African Swine Fever (ASF)**

- ASF outbreak was sweeping through swine populations in China, leading to massive mass cullings and a subsequent increase in the price of the country’s favourite protein.

**Background:**

- ASF has been seen in other Asian countries as well. Most recently, the Philippines had to cull more than 7,000 pigs to arrest the spread of ASF.

- African Swine Fever (ASF) is a highly contagious and fatal animal disease that infects domestic and wild pigs, typically resulting in an acute form of hemorrhagic fever.

- It was first detected in Africa in the 1920s.

- The mortality is close to 100 per cent, and since the fever has no cure, the only way to stop it spreading is by culling the animals.

- ASF is not a threat to human beings since it only spreads from animals to other animals.

- According to the FAO, “its extremely high potential for transboundary spread has placed all the countries in the region in danger and has raised the spectre of ASF once more escaping from Africa. It is a disease of growing strategic importance for global food security and household income”.

23. **Non-Communicable Diseases (NCDs)**

- Noncommunicable diseases (NCDs), also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors.

- The main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes.

- NCDs threaten progress towards the 2030 Agenda for Sustainable Development, which includes a target of reducing premature deaths from NCDs by one-third by 2030.

24. **Ebola Virus**

- Ebola outbreak in DR Congo has been declared as a global health emergency by the World Health Organization (WHO).

What is public health emergency of international concern?
• Public health emergency of international concern is defined as an “extraordinary event that is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response.” The public emergency announcement is the highest level of alarm that is only raised during the gravest of outbreaks.
• WHO only declares a disease or outbreak a global emergency when it threatens to affect other countries and requires a coordinated international response.

How will declaration of global health emergency help?
• The declaration of a global health emergency will bring larger international focus on the alarming issue and it will also help bring in more financial and technical support. At the same time, the declaration can cause governments of neighbouring nations to panic and overreact by shutting down borders.

What you need to know about Ebola?
• Ebola virus disease (EVD), formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans.
• Transmission: The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission via direct contact (through broken skin or mucous membranes) with:
  o Blood or body fluids of a person who is sick with or has died from Ebola
  o Objects that have been contaminated with body fluids (like blood, feces, vomit) from a person sick with Ebola or the body of a person who died from Ebola.
• People remain infectious as long as their blood contains the virus.
• Pregnant women who get acute Ebola and recover from the disease may still carry the virus in breastmilk, or in pregnancy related fluids and tissues. This poses a risk of transmission to the baby they carry, and to others. Women who become pregnant after surviving Ebola disease are not at risk of carrying the virus.
• The average EVD case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks.
• Prevention: Community engagement is key to successfully controlling outbreaks. Good outbreak control relies on applying a package of interventions, namely case management, surveillance and contact tracing, a good laboratory service and social mobilisation.
• Early supportive care with rehydration, symptomatic treatment improves survival. There is as yet no licensed treatment proven to neutralise the virus but a range of blood, immunological and drug therapies are under development.

More than 11,000 people died in the Ebola outbreak in West Africa in 2014-2015, mainly in Guinea, Sierra Leone and Liberia.

25. Kala azar
• Study warns Kala azar patients can infect others even after treatment. Research showed that patients with the condition can be a source of infection for others in their community.

Background:
• Kala-azar is endemic to the Indian subcontinent in 119 districts in four countries (Bangladesh, Bhutan, India and Nepal).
• This disease is the second-largest parasitic killer in the world. Elimination is defined as reducing the annual incidence of Kala Azar (KA) to less than 1 case per 10,000 people at the sub-district level.

Kala-azar:
• What is it? Visceral leishmaniasis (VL), also known as kala-azar, black fever, and Dumdum fever, is the most severe form of leishmaniasis and, without proper diagnosis and treatment, is associated with high fatality.

• Spread: Caused by protozoan parasites of the Leishmania genus, migrates to the internal organs such as the liver, spleen (hence “visceral”), and bone marrow.

• Signs and symptoms include fever, weight loss, fatigue, anaemia, and substantial swelling of the liver and spleen.

26. Nipah Virus

• The deadly Nipah Virus had resurfaced in Kerala.

• It was first identified in 1998 at Kampung Sungai Nipah village, Malaysia. The virus is named after this village.

What are the symptoms in humans?

• The symptoms of Nipah are similar to that of influenza: fever, muscle pain, and respiratory problems. Inflammation of the brain can also cause disorientation. Late onset of Encephalitis can also occur. Sometimes a person can have an asymptomatic infection, and be a carrier of Nipah and not show any symptoms.

Are there any vaccines?

• Currently, there are no vaccines for both humans and animals. Intensive supportive care is given to humans infected by Nipah virus.

• According to WHO, ribavarin can reduce the symptoms of nausea, vomiting, and convulsions associated with the disease. Individuals infected need to be hospitalised and isolated. Special care should be taken to prevent human-to-human transmission. Surveillance systems should be established to detect the virus quickly and to initiate appropriate control measures.
27. Zika Virus

- Zika virus is similar to dengue fever, yellow fever and West Nile virus. The virus belongs to family Flaviviridae and Genus Flavivirus.
- Carried by infected Aedes aegypti mosquitoes, Zika is largely transmitted through bites, but can also occur through intrauterine infection. It can also spread through blood transfusion and sexual contact.
- It was first identified in 1947 in Zika Forest, Uganda from where it derives its name.
- If a woman is bitten by an infected mosquito and becomes infected, Zika can cross into the placenta and affect the fetus. While anyone can contract Zika, pregnant women are the most at risk due to the potential for fetal microcephaly in which infants are born with abnormally smaller heads and other neurologic abnormalities.
- Besides there is also possible link between virus and Guillain-Barré syndrome (a condition in which the body’s immune system attacks part of the nervous system) is also suspected.

Symptoms include fever, headache, red eyes, skin rash, fatigue, muscle pain etc.

Treatment and Prevention: There is no specific treatment or vaccine currently available to treat Zika. The best form of prevention is protection against mosquito bites and clearing stagnant water where mosquitoes breed.

In India, first outbreak of Zika Virus was reported in Ahmedabad, Gujarat in 2017.

28. Acute Encephalitis Syndrome (AES)

- An epidemic of Acute Encephalitis Syndrome (AES) was broken out in some north Bihar districts. Locally known as Chamki Bukhar in the state.

About AES:
- Acute encephalitis syndrome (AES) is a serious public health problem in India.
- It is characterized as acute-onset of fever and a change in mental status (mental confusion, disorientation, delirium, or coma) and/or new-onset of seizures in a person of any age at any time of the year.
- The disease most commonly affects children and young adults and can lead to considerable morbidity and mortality.
- Viruses are the main causative agents in AES cases, although other sources such as bacteria, fungus, parasites, spirochetes, chemicals, toxins and noninfectious agents have also been reported over the past few decades.
- Japanese encephalitis virus (JEV) is the major cause of AES in India (ranging from 5%-35%).
- Nipah virus, Zika virus are also found as causative agents for AES.
- In India, AES outbreaks in north and eastern India have been linked to children eating unripe litchi fruit on empty stomachs. Unripe fruit contain the toxins hypoglycin A and methylenecyclopropylglycine (MCPG), which cause vomiting if ingested in large quantities. Hypoglycin A is a naturally occurring amino acid found in the unripened litchi that causes severe vomiting (Jamaican vomiting sickness), while MCPG is a poisonous compound found in litchi seeds.

Govt. of India, as part of the National Programme for Prevention & Control of JE/AES, follows a multi-pronged strategy encompassing preventive (sanitation, safe drinking water, improvement in nutrition etc.), case management (capacity building of medical and para-medical staff, referral
etc.) and rehabilitation (physical and social rehabilitation of disabled children), measures to address the problems relating to JE/AES.
Education

1. **Annual Status of Education Report (ASER) 2019**

The Annual Status of Education Report (ASER) 2019 has been published by education non-profit Pratham.

**What is ASER and why it matters?**

This is an annual survey that aims to provide reliable estimates of children’s enrolment and basic learning levels for each district and state in India.

ASER has been conducted every year since 2005 in all rural districts of India.

- It is the largest citizen-led survey in India.
- It is also the only annual source of information on children’s learning outcomes available in India today.
- Unlike most other large-scale learning assessments, ASER is a household-based rather than school-based survey. This design enables all children to be included – those who have never been to school or have dropped out, as well as those who are in government schools, private schools, religious schools or anywhere else.

**How the survey was conducted?**

- The survey was conducted in 26 districts across 24 states in India, covering a total of 1,514 villages, 30,425 households, and 36,930 children in the age group of 4-8 years.
- The sampled children’s enrolment status in pre-school or school was collected. Children did a variety of cognitive, early language, and early numeracy tasks; and activities to assess the children’s social and emotional development were also undertaken.
- All tasks were done one-on-one with children in their homes.

**What is early years?**

The latest edition focuses on early years. It is defined globally as age 0-8, is known to be the most important stage of cognitive, motor, social and emotional development in the human life cycle.

2. **National Policy on Education (NPE)**

The National Policy on Education (NPE) is a policy formulated by the Government of India to promote education amongst India’s people. The policy covers elementary education to colleges in both rural and urban India. The first NPE was promulgated in 1968 by the government of Prime Minister Indira Gandhi, and the second by Prime Minister Rajiv Gandhi in 1986. The government of India had appointed a new committee under K. Kasturirangan to prepare a Draft for the new National Education Policy in 2017.

**Key highlights of the draft:**

Early childhood care and education:
• High-quality early childhood care and education will be provided for all children between the ages of 3 and 6 by 2025.
• This will be done within institutions such as schools and anganwadis, which would have a mandate to take care of the overall well-being of the child—nutritional, health, and education.
• These institutions will also provide similar support to families for children younger than three years of age—within their homes. The criticality of brain development in the early years has become clear in the past few decades; this policy will result in a massive positive multiplier effect on society.

Ensuring foundational literacy and numeracy:
• Every student will start achieving age-appropriate foundational literacy and numeracy by 2025. A slew of programmes and measures are articulated for this purpose. This is aimed at the basic issue facing our education system today—of students not being able to read, write and do elementary math.

Transformed curricular and pedagogical structure for school education:
• The curriculum and pedagogical structures will be designed anew to be appropriate and effective, based on children’s cognitive and socio-emotional development.
• The curriculum will be integrated and flexible with equal emphasis on all subjects and fields. There will be no separation of curricular, co-curricular or extra-curricular areas—with all in a single category of equal importance.
• Vocational and academic streams will be integrated and offered to all students. Examination systems will be radically changed to assess real learning, make them stress-free, and aim for improvement instead of the passing of judgements.

The current structure of school education must be restructured on the basis of the development needs of students. This would consist of a 5-3-3-4 design comprising: (i) five years of foundational stage (three years of pre-primary school and classes one and two), (ii) three years of preparatory stage (classes three to five), (iii) three years of middle stage (classes six to eight), and (iv) four years of secondary stage (classes nine to 12).

Universal access and retention in schools:
• All Indians between ages 3 and 18 to be in school by 2030. The Right to Education Act will be extended from pre-school to class XII.

Teachers at the centre:
• The profession of teaching, and so teachers, will be at the centre of the education system, focused on the student and educational aims. All schools will be fully resourced with teachers—with working conditions for an energetic work culture. No “temporary” teachers will be allowed; all positions will be filled with competent and qualified teachers. A development-oriented performance management system will be put in place. The teacher education system will be transformed, with rigorous teacher preparation through a four-year integrated stage and subject-specific programmes offered only in multi-disciplinary institutions.

New institutional architecture for higher education:
• India’s current 800 universities and over 40,000 colleges will be consolidated into about 10,000-15,000 institutions of excellence to drive improvement in quality and expansion of capacity. This architecture will have only large multi-disciplinary institutions, with significant investment.
• Three types of higher education institutions will be there: Type 1 universities focused on research but also teaching all programmes, undergrad to doctoral; Type 2 universities focused...
on teaching all programmes while also conducting research and; Type 3 colleges focused on teaching undergrad programmes. All types will grant their own degrees. There will be no system of university affiliations.

High-quality liberal education:
• All undergraduate education will be broad-based liberal education that integrates the rigorous study of sciences, arts, humanities, mathematics and vocational and professional fields with choices offered to students. Imaginative and flexible curricula will develop critical thinking, creative abilities and other fundamental capacities. Multiple exit and entry points will be offered, with appropriate certification after one, two, three and four years of study. There will be a four-year undergraduate programme available in addition to three-year programmes.

Increase in public investment:
• There will be a substantial increase in public investment to expand and vitalize public education at all levels.

What is left out?
• While the policy talks about the need to bring “unrepresented groups” into school and focus on educationally lagging “special education zones”, it misses a critical opportunity of addressing inequalities within the education system.
• It misses to provide solutions to close the gap of access to quality education between India’s rich and poor children.
• Not specifying a common minimum standard below which schools cannot fall, creates conditions where quality of facilities in some schools will only sink lower, widening this gap.
• It proposes a roll back of existing mechanisms of enforcement of private schools making parents “de-facto regulators” of private schools. Parents, and particularly poor and neo-literate parents, cannot hold the onus of ensuring that much more powerful and resourced schools comply with quality, safety and equity norms.
Gender Issues

1. Transgender Persons (Protection of Rights) Act, 2019
   - The Transgender Persons (Protection of Rights) Act, 2019 is an act of the Parliament of India with the objective to provide for protection of rights of transgender persons, their welfare, and other related matters.
   - Following protests by the queer community against the 2016 and 2018 bills, the bill tabled in 2019 did away with few of the severely criticised provisions of the 2018 bill, such as criminalisation of begging and the establishment of a District Screening Committee to process applications for issuance of transgender person certificates.
   - However, it failed to incorporate yet other principles in line with the Supreme Court judgment in National Legal Services Authority v. Union of India (NALSA v. UOI) in 2014, such as the right of transgender persons to self-perceived gender identity without undergoing sex reassignment surgery, and mandatory reservations in jobs and educational institutions.
   - Criticism was also made of the lesser punishment for crimes against transgender persons compared with punishment for crimes against cisgender persons.
   - Under the provisions of the 2019 act, a transgender person can apply to the District Magistrate for a transgender person certificate which will give them the right to change the name on their birth certificate and have all documents updated accordingly.
   - The 2019 act also protects transgender children and provides for states and institutions to come up with adequate policies for the welfare of transgender persons.
   - However, unlike the Rights of Transgender Persons Bill, 2014 neither the 2018 nor the 2019 act provide for mandatory reservations for transgender persons in educational institutions and jobs.
   - The 2019 act provides for punishment for crimes against transgender persons, which stands as an imprisonment for a term not less than six months but which may extend to two years and a fine.
Children

1. **Juvenile Justice (Care and Protection of Children) Act, 2015**


**Aim:** To Comprehensively address children in conflict with law and children in need of care and protection.

Some of the key provisions include:

- **Change in nomenclature** from ‘juvenile’ to ‘child’ or ‘child in conflict with law’, across the Act to remove the negative connotation associated with the word “juvenile”;
- **Inclusion of several new definitions** such as orphaned, abandoned and surrendered children; and petty, serious and heinous offences committed by children;
- It mandates setting up **Juvenile Justice Boards and Child Welfare Committees** in every district. Both must have at least one-woman member each. Clear timelines for inquiry by Juvenile Justice Board (JJB).
- **Special provisions for heinous offences** committed by children above the age of sixteen year.
- Under Section 15, special provisions have been made to tackle child offenders committing heinous offences in the age group of 16-18 years. The Juvenile Justice Board is given the option to transfer cases of heinous offences by such children to a Children’s Court (Court of Session) after conducting preliminary assessment.
- Separate new chapter on Adoption to streamline adoption of orphan, abandoned and surrendered children
- **Also, the Central Adoption Resource Authority (CARA)** was granted the status of a statutory body to enable it to perform its function more effectively.
- **The Act included several new offences** committed against children which are not adequately covered under any other law. These include: sale and procurement of children for any purpose including illegal adoption, corporal punishment in child care institutions, use of child by militant groups, offences against disabled children and, kidnapping and abduction of children.
- All Child Care Institutions, whether run by State Government or by voluntary or non-governmental organisations are to be mandatorily registered under the Act within 6 months from the date of commencement of the Act.

**Key changes proposed-** the Juvenile Justice (Care and Protection of Children) Amendment Bill, 2018:

- The Bill provides that instead of the court, the district magistrate will issue adoption orders to address the high pendency of adoption cases.
- The Bill also seeks to transfer all pending matters related to adoption before any court to the district magistrate having jurisdiction over the area.

2. **Central Adoption Resource Authority**

- Central Adoption Resource Authority (CARA) is a statutory body of Ministry of Women & Child Development, Government of India. It functions as the nodal body for adoption of Indian children and is mandated to monitor and regulate in-country and inter-country adoptions.
- CARA is designated as the Central Authority to deal with inter-country adoptions in accordance with the provisions of the Hague Convention on Inter-country Adoption, 1993, ratified by Government of India in 2003.

CARA primarily deals with adoption of orphan, abandoned and surrendered children through its associated /recognised adoption agencies.
• In 2018, CARA has allowed individuals in a live-in relationship to adopt children from and within India.

3. **Don’t detain children in jails, lockups, Supreme Court tells police**
The Supreme Court has made it clear that *the police have no right to detain children in conflict with law in a lockup or a jail.*

**Observations made by the Court:**
• A juvenile in conflict with law, if apprehended, has to be placed immediately under the care of *the special juvenile police unit or a designated child welfare officer.*
• The child has to be produced before *the Juvenile Justice Board (JJB).*
• Once a child is produced before a JJB, *bail is the rule.* And even if, for some reason, bail is not granted, *a child cannot be put behind bars. He has to be lodged either in an observation home or in a place of safety.*
• The *Juvenile Justice (Care and Protection of Children) Act, 2015* is meant to protect children and not detain them in jail or keep them in police custody.

4. **How to treat a child witness?**

   **What are the international conventions on children in these situations?**
   • *Convention on the Rights of the Child since 1992* was adopted by the General Assembly of the United Nations in 1989. As per the Convention, in all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the *best interests of the child shall be a primary consideration.*
   • *In 2009, the ‘United Nations: Justice in Matters involving Child Victims and Witnesses in Crime: Model Law’ provided a more specific set of guidelines in the context of child witnesses.* These guidelines recommend that authorities treat children in a caring and sensitive manner, with interview techniques that “minimise distress or trauma to children”.

   **How do Indian laws address the issue of child witnesses?**
   Under *Section 118 of the Indian Evidence Act, 1872,* there is *no minimum age for a witness.* Usually during a trial, the court, before recording the testimony of a child witness, determines his or her competency on the basis of their ability to give rational answers.

   **What are the laws pertaining to the questioning of children?**
   **The Juvenile Justice (Care and Protection of Children) Act, 2015:**
   • The Act’s very *preamble* says that a “child-friendly approach in the adjudication and disposal of matters in the best interest of children” must be adhered to.
   • It also requires that interviews of children be done by specialised units of police who are trained to sensitively deal with them.
   • The Act prescribes that a *Special Juvenile Police Unit* is to be constituted by the state government in each district and city, headed by a police officer not below the rank of Deputy Superintendent of Police, and including two social workers, at least one of whom must be a woman, and both of whom should be experienced in the field of child welfare.
   • Their work includes coordinating with the police towards sensitive treatment of children.
   • The Act also provides for a *Child Welfare Committee in every district* to take cognisance of any violations by the authorities in their handling of children.

   **The Protection of Children from Sexual Offences (POCSO) Act, 2012:**
   • It has *specific guidelines regarding interviewing children as witnesses.*
   • It states that interviews should be conducted in a safe, neutral, child-friendly environment, including allowing for them to be done at homes.
• It says a child should not be made to recount the incident in question multiple times.
• The Act also allows for a support person, who could be trained in counselling, to be present with the child to reduce stress and trauma.

5. **POCSO Act**
• The Protection of Children from Sexual Offences Act (POCSO Act) 2012 was formulated in order to effectively address sexual abuse and sexual exploitation of children.
• **Role of police:** The Act casts the police in the role of child protectors during the investigative process. Thus, the police personnel receiving a report of sexual abuse of a child are given the responsibility of making urgent arrangements for the care and protection of the child, such as obtaining emergency medical treatment for the child and placing the child in a shelter home, and bringing the matter in front of the CWC, should the need arise.
• **Safeguards:** The Act provides for special courts that conduct the trial in-camera and without revealing the identity of the child, in a manner that is as child-friendly as possible. Hence, the child may have a parent or other trusted person present at the time of testifying and can call for assistance from an interpreter, special educator, or other professional while giving evidence. The Act stipulates that a case of child sexual abuse must be disposed of within one year (as far as possible) from the date the offence is reported.
• **Mandatory reporting:** The Act also provides for mandatory reporting of sexual offences. This casts a legal duty upon a person who has knowledge that a child has been sexually abused to report the offence; if he fails to do so, he may be punished with six months’ imprisonment and/or a fine.
• **Definitions:** The Act defines a child as any person below eighteen years of age. It defines different forms of sexual abuse, including penetrative and non-penetrative assault, as well as sexual harassment and pornography. It deems a sexual assault to be “aggravated” under certain circumstances, such as when the abused child is mentally ill or when the abuse is committed by a person in a position of trust or authority like a family member, police officer, teacher, or doctor.
• People who traffic children for sexual purposes are also punishable under the provisions relating to abetment in the Act.

6. **Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/Investigation Unit**
• The Central Bureau of Investigation (CBI) has set up an Online Child Sexual Abuse and Exploitation (OCSAE) Prevention/Investigation Unit.
• The unit, which will function under the agency’s Special Crime Zone in Delhi, will collect and disseminate information on online child sexual abuse and exploitation.
• It will also probe such offences covered under the IPC, the Protection of Children from Sexual Offences Act and the Information Technology Act, apart from other relevant laws.

7. **China’s one-child policy**
The birth rate in China has fallen to the lowest in 70 years.
**Why One Child Policy was adopted by China?**
It was adopted out of the Malthusian fears that unchecked population growth would lead to economic and environmental catastrophe. It was also a response to concerns about food shortages.

**What is Malthusian theory all about?**
Thomas Robert Malthus was the first economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population (1798)*, for which he collected empirical data to support his thesis.
• He argued that *if left unchecked, a population will outgrow its resources, leading to a host of problems.*
Reports / Index

1. **A Future for the World's Children report**

   ‘A Future for the World’s Children’ report was released by the WHO, UNICEF and the Lancet medical journal. The report calculates the **Flourishing Index and Sustainability Index of 180 countries**.

   **How are the countries ranked?**
   1. **Flourishing Index:**
      - Flourishing is the geometric mean of Surviving and Thriving.

   2. **Sustainability Index:**
      - The Sustainability Index ranks countries on the basis of excess carbon emissions compared with the 2030 target.

   **Performance of India:**
   - India stands 77th (sustainability index) and is at 131st on a ranking that measures the best chance at survival and well-being for children.
   - India has improved in health and sanitation but has to increase its spending on health.

2. **Worldwide Educating for the Future Index (WEFFI) 2019**

   Worldwide Educating for the Future Index (WEFFI) 2019 report was published by The Economist Intelligence Unit.

   **About the index:**
   - Commissioned by the Yidan Prize Foundation.
   - Developed to assess the effectiveness of education systems in preparing students for the demands of work and life in a rapidly changing landscape.
   - **Significance:** It is the first comprehensive global index to evaluate inputs to education systems rather than outputs such as test scores and concentrates on the 15-24 age band.

   **How are countries ranked?**
   - Countries are ranked based on their abilities to equip students with skill-based education.
   - The rankings are based on three categories:
     - Policy environment.
     - Teaching environment.
     - Overall socio-economic environment.

   **India’s performance:**
   - Ranked 35th. Jumped five ranks from the 40th rank.

3. **Women, Business and the Law 2020**

   Women, Business and the Law 2020, the sixth edition in a series, has been released. Women, Business and the Law (WBL) is a World Bank Group project collecting unique data on the laws and regulations that restrict women’s economic opportunities.

   **About the Women, Business and the Law Index:**
   - The index analyzes laws and regulations affecting women’s economic inclusion in 190 economies. India is placed **117th among 190 countries**.
   - It is composed by eight indicators structured around women’s interactions with the law as they begin, progress through and end their careers, aligns different areas of the law with the economic decisions women make at various stages of their lives.
The indicators are:
- Mobility, Workplace, Pay, Marriage, Parenthood, Entrepreneurship, Assets, and Pension.

4. **Gender gap index**

   Global Gender Gap Report 2020 has been released by the World Economic Forum.

   **About Global gender gap report:**
   It is published annually by the world economic forum since 2006.
   Global gender gap index is a part of this which measures gender equality across four pillars— they are economic opportunity, political empowerment, educational attainment and health and survival.

   **Significance:**
   The Report aims to serve “as a compass to track progress on relative gaps between women and men on health, education, economy and politics”.

   **Performance of India:**
   - India has been ranked 112th among 153 countries this year. In 2018, it ranked 108.

5. **Global Hunger Index**

   The 2019 Global Hunger Index report has been released.

   The GHI ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst. Values less than 10 reflect low hunger, values from 20 to 34.9 indicate serious hunger; values from 35 to 49.9 are alarming; and values of 50 or more are extremely alarming.

   **What is Global Hunger Index?**
   The report is a peer-reviewed publication released annually by Welthungerhilfe and Concern Worldwide.
   The GHI scores are based on a formula that captures three dimensions of hunger— insufficient caloric intake, child undernutrition, and child mortality— using four component indicators:
   1. **UNDERNOURISHMENT:** the share of the population that is under-nourished, reflecting insufficient caloric intake
   2. **CHILD WASTING:** the share of children under the age of five who are wasted (low weight-for-height), reflecting acute undernutrition.
   3. **CHILD STUNTING:** the share of children under the age of five who are stunted (low height-for-age), reflecting chronic undernutrition.
   4. **CHILD MORTALITY:** the mortality rate of children under the age of five.

   The index is topped by Central African Republic. India ranked 102 on the index among 117 qualifying countries.

6. **State of the World’s Children report**


   **Ranking of countries:** The report has ranked countries in the order of ‘highest burden of death among children of under-5’ to the ‘lowest burden of death among children of under-5’.
   The report analyses the global state of children’s health vis-a-vis malnutrition, obesity, anaemia and other health issues.

   **Efforts by government recognised:**
   - The report said POSHAN Abhiyaan or the National Nutrition Mission is playing a major role in improving nutrition indicators across India.
• The *Anaemia Mukt Bharat programme* to fight anaemic prevalence has been recognized as one of the best programmes implemented by governments across the world to address malnutrition.

• The *6X6X6 strategy (six target beneficiary groups, six interventions and six institutional mechanisms) of the programme* has been highlighted for using anaemia testing and treatment as the entry point to provide information on healthy diets.

7. **Global Tuberculosis (TB) Report**

The report has been released by WHO. The report provides a *comprehensive and up-to-date assessment of the TB epidemic and progress* in the response at global, regional and country levels for India. *Tuberculosis incidence rate* in India has decreased by almost 50,000 patients over the past one year (26.9 lakh TB patients in India in 2018).

**Global TB targets:**

*SDG 3.3* includes a target of ending the TB epidemic by 2030

*The World Health Assembly-approved Global TB Strategy* aims for a 90 per cent reduction in TB deaths and an 80 per cent reduction in the TB incidence rate by 2030 compared with 2015 levels. The Strategy established milestones for 2020 of a 35% reduction in TB deaths and a 20% reduction in the TB incidence rate from 2015 levels.

**The UN Political Declaration on TB in 2018 includes 4 new global targets:**

8. **TB Harega Desh Jeetega’ Campaign**

• ‘TB Harega Desh Jeetega Campaign’ has been launched with an aim to eliminate tuberculosis from India.

• The Government of India has made 2025 as its target to eliminate tuberculosis from the country.

**About ‘TB Harega Desh Jeetega’ Campaign:**

• **Campaign aims to** improve and expand the reach of TB care services across the country, by 2022.

• **Three pillars of the campaign** - clinical approach, public health component and active community participation.

• **Supporting aspects of the campaign** – patient support, private sector engagement, political and administrative commitment at all levels.

• The **government will ensure that** all patients, at private or public hospitals, receive free-of-cost and high-quality TB care.

**Why is Tuberculosis a major cause of concern?**

• TB is one of the leading causes of death worldwide and the leading cause from a single infectious agent, ranking above HIV/AIDS.

• TB is an infectious disease caused by the *bacillus Mycobacterium tuberculosis*.

• It typically affects the lungs (pulmonary TB) but can also affect other sites.

• The disease is spread when people who are sick with pulmonary TB expel bacteria into the air, for example by coughing.

• Broader influences on the TB epidemic include levels of poverty, HIV infection, under nutrition and smoking.

• Diagnostic tests for TB disease include – Rapid molecular test, Sputum smear microscopy, Culture-based methods

• Without treatment, the mortality rate from TB is high.
9. **State of the World Population 2019**
   - State of the World Population 2019, the flagship report of the United Nations Population Fund (UNFPA), has been released.
   - India accounts for over one-sixth of the world’s population in 2019 (1.37 billion out of 7.71 billion).
   - India's life expectancy at birth is lower than the world’s (69 years to 72).
   - India’s fertility rate in 2019 is 2.3 births per woman, compared to 2.5 worldwide.

10. **Time to Care report**
    A report titled “Time to Care” has been released by Oxfam International. The report focuses on the alleviation of global poverty.
Government / Private Initiatives

1. **Disha Law**
The Andhra Pradesh Legislative Assembly had passed the **Andhra Pradesh Disha Bill, 2019 (Andhra Pradesh Criminal Law (Amendment) Act 2019)**. Disha is the name given to the veterinarian who was raped and murdered in Hyderabad on 27 November 2019.

2. **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013**
The Women and Child Development Ministry had steered the **Sexual Harassment of Women and Workplace (Prevention, Prohibition and Redressal) Act in 2013**, which was applicable to government offices, the private sector, NGOs and the unorganised sector.

**Need for stricter provisions:**
- The 2013 Act has entrusted the **powers of a civil court to the Internal Complaints Committee (ICC)** without specifying if the members need to have a legal background. This was a major lacuna given that the ICC formed an important grievance redressal mechanism under the framework of the act.
- The 2013 act only imposed a fine of ₹50,000 on employers for non-compliance with respect to the constitution of the ICC. This proved to be insufficient in ensuring that the employers constituted the ICC in a time-bound manner.

**Overview of Vishakha guidelines:**
the **Vishakha Guidelines** laid down by the Supreme Court in 1997, on which the 2013 Act was based.
It made the employer responsible to prevent or deter acts of sexual harassment at the workplace.
**Definition of sexual harassment:**
Sexual Harassment of Women at Workplace (Prevention, Prohibition And Redressal) Act, 2013 defines sexual harassment:

*It includes “any one or more” of the following “unwelcome acts or behaviour” committed directly or by implication:* Physical contact and advances, Sexually coloured remarks, Showing pornography, A demand or request for sexual favours, Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

**Key provisions of the act:**
- The act makes it mandatory that all offices, hospitals, institutions and other workplaces should have an internal redressal mechanism for complaints related to sexual harassment.
- This Act lays down the procedures for a complaint and inquiry and the action to be taken.
- Every employer is required to constitute an Internal Complaints Committee at each office or branch with 10 or more employees. The District Officer is required to constitute a Local Complaints Committee at each district, and if required at the block level.
- It lays down the procedures and defines various aspects of sexual harassment.
- A woman can be of any age, whether employed or not, who “alleges to have been subjected to any act of sexual harassment”, that means the rights of all the women working or visiting any workplace, in any capacity, are protected under the Act.
- The act does not cover members of the armed forces including Women in the armed forces.

**3. Pulse Polio Programme**
January 18 marked the beginning of 2020 Pulse Polio Programme. The Union health ministry has launched the campaign to check the disease that affects children at a young age.

**What is Polio?**
The World Health Organization (WHO) defines polio or poliomyelitis as “*a highly infectious viral disease*, which mainly affects young children.”

**Transmission:** The virus is transmitted by person-to-person, spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine, from where it can invade the nervous system and can cause paralysis. **Initial symptoms of polio include** fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs. In a small proportion of cases, the disease causes paralysis, which is often permanent. There is no cure for polio, it can only be prevented by immunization.”

**What is the Pulse Polio Programme?**
India launched the Pulse Polio immunisation programme in 1995, after *a resolution for a global initiative of polio eradication was adopted by the World Health Assembly* (WHA) in 1988.

**Coverage:**
Children in the age group of 0-5 years are administered polio drops during national and sub-national immunisation rounds (in high-risk areas) every year.

**Polio in India:**
The WHO on February 24, 2012, removed India from the list of countries with active endemic wild polio virus transmission.

Two years later, the South-East Asia Region of the WHO, of which India is a part, was certified as polio-free.

**Prevention:**
To prevent the virus from coming to India, the government has since March 2014 made the Oral Polio Vaccination (OPV) mandatory for those travelling between India and polio-affected countries, such as Afghanistan, Nigeria, Pakistan, Ethiopia, Kenya, Somalia, Syria and Cameroon.
4. **What is a vaccine-derived poliovirus?**

In the last one year or so, polio has made a comeback in countries such as the Philippines, Malaysia, Ghana, Myanmar, China, Cameroon, Indonesia and Iran, mostly as vaccine-derived polio infection. All these countries had wiped the virus out at various times during the last couple of decades.

**What is a vaccine-derived poliovirus?**

It is a strain of the weakened poliovirus that was initially included in oral polio vaccine (OPV) and that has changed over time and behaves more like the wild or naturally occurring virus. This means it can be spread more easily to people who are unvaccinated against polio and who come in contact with the stool or respiratory secretions, such as from a sneeze, of an infected person. These viruses may cause illness, including paralysis.

**How is it spread?**

- Oral polio vaccine (OPV) contains an attenuated (weakened) vaccine-virus, activating an immune response in the body. When a child is immunized with OPV, the weakened vaccine-virus replicates in the intestine for a limited period, thereby developing immunity by building up antibodies.
- During this time, the vaccine-virus is also excreted. In areas of inadequate sanitation, this excreted vaccine-virus can spread in the immediate community (and this can offer protection to other children through ‘passive’ immunization), before eventually dying out.

**What’s the issue here?**

A circulating vaccine-derived poliovirus (cVDPV) occur when routine or supplementary immunization activities (SIAs) are poorly conducted and a population is left susceptible to poliovirus, whether from vaccine-derived or wild poliovirus. Hence, the problem is not with the vaccine itself, but low vaccination coverage. If a population is fully immunized, they will be protected against both vaccine-derived and wild polioviruses.

**Where does India stand?**

In January 2014, **India was declared polio-free** after three years on zero cases. In 2018, there was a brief scare when some vials of the polio vaccine were found contaminated with the polio 2 virus that had been eradicated from the country in 1999. However, WHO quickly issued a statement saying that all vaccines used in the government programme in India were safe.

The last case due to wild poliovirus in the country was detected on January 13, 2011.

**How should India be prepared?**

It calls for heightened vigilance, in short. Some years ago, India introduced the injectable polio vaccine in the Universal Immunisation Programme. This was to reduce chances of vaccine-derived polio infection, which continues to happen in the country. If both wild and vaccine-derived polio infection are reduced to zero, it would mean there is no trace left of the virus anywhere in the world, except in controlled situations in laboratories for future contingencies.

5. **Social Security code**

Labour Minister has introduced the **Code on Social Security, 2019, in the Lok Sabha.**
Objectives:
• To amalgamate a clutch of existing laws and proposes several new initiatives including universal social security for unorganized sector workers and, insurance and health benefits for gig workers.
• To Corporatize of existing organizations like EPFO and ESIC headed by people other than the labour minister.

Key features of the code:
2. The bill seeks to establish a social security fund and tap the corporate social responsibility fund to offer unorganized sector workers medical, pension, death and disability benefits via the employee’s state insurance corporation.
3. Exemption: It will empower the central government to exempt select establishments from all or any of the provisions of the code and makes Aadhaar mandatory for availing benefits under various social security schemes.
4. It proposes to offer gratuity to fixed term employees after one year of service on a pro-rata basis as against the current practice of five years.
5. Insurance, PF, life cover for unorganized sector employees: Central Government shall formulate and notify, from time to time, suitable welfare schemes for unorganised workers on matter relating to life and disability cover; health and maternity benefits; old age protection; and any other benefit as may be determined by the central government.

6. Kanyashree scheme
The state government of West Bengal is setting up Kanyashree University in Nadia district and Kanyashree colleges across the state so as to empower girls.

About Kanyashree scheme:
What is it? Kanyashree is a conditional cash transfer scheme aiming at improving the status and wellbeing of the girl child by incentivising schooling of teenage girls and delaying their marriages until the age of 18. The United Nations, in 2017, awarded the West Bengal government the first place for Public Service for its “Kanyashree” scheme.

The benefits under the scheme will be granted to girls who belong to families with annual family income not more than Rs. 1, 20,000/-

Performance of the scheme: Through the initiative, cash was deposited into the bank account of girls for every year they remained in school and were unmarried. This initiative led to a “drastic reduction in child marriage, increase in female education and female empowerment.”

7. National Health Systems Resource Centre (NHSRC)
Designation of National Health Systems Resource Centre (NHSRC) as a WHO Collaborating Centre for Priority Medical Devices and Health Technology Policy.

Why do we need such collaborations?
Such global collaborations in the area of health technology will ensure that scientific and technological advances, research and development as well as innovative technologies play a substantial supportive role in healthcare and enable us to reach the public health goals and achieve universal health coverage.

About NHSRC:
Set up under the National Rural Health Mission (NRHM) to serve as an apex body for technical assistance. Established in 2006. **Mandate** is to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW) at the centre and in the states.

**Composition:**
- It has a 23 member Governing Body, chaired by the Secretary, MoHFW, Government of India with the Mission Director, NRHM as the Vice Chairperson of the GB and the Chairperson of its Executive Committee.


8. **National Medical Commission**

National Medical Commission (NMC) is an Indian regularity body of 33 members who overtake medical education regulations from Medical Council of India. **National Medical Commission Act 2019** proposes set up a National Medical Commission with 33 members.

**Appointment:** These members will be appointed by the central government on the recommendation of a committee.

**Composition:** The members will include a chairperson, who must be a senior medical practitioner and academic with at least 20 years of experience, 10 ex officio members and 22 part-time members.

The *ex officio members* will include the presidents of the undergraduate and postgraduate medical education boards, the director general of Indian Council of Medical Research, and a director of one of the AIIMS, among others.

**Part-time members,** on the other hand, will include experts from the field of management, law, medical ethics, etc. and nominees of states and union territories.

**Functions of NMC:**
- The NMC will frame policies for regulating medical institutions and medical professionals, assessing the requirements of healthcare-related human resources and infrastructure, and ensuring compliance by the State Medical Councils of the regulations made under the Bill.
- Besides this, the NMC will frame guidelines for determination of fees for up to 50 per cent of the seats in private medical institutions and deemed universities which are regulated under the Bill.

9. **National Digital Library of India**

- Union Ministry of Human Resource Development (HRD) has launched National Digital Library of India project.

**What is it?**
- National Digital Library of India (NDLI) is a project of the Ministry of Human Resource Development under the aegis of National Mission on Education through Information and Communication Technology (NMEICT).
- It is developed by IIT Kharagpur.
- **Objective:** The objective of NDL is to make digital educational resources available to all citizens of the country to empower, inspire and encourage learning.

**Key facts:**
• NDL is the Single Window Platform that collects and collates metadata from premier learning institutions in India and abroad, as well as other relevant sources.
• It is a digital repository containing textbooks, articles, videos, audio books, lectures, simulations, fiction and all other kinds of learning media.
• It makes quality learning resources available to all learners and has 1.7 Crore content from more than 160 sources, in over 200 languages.

About NMEICT:
• The National Mission on Education through Information and Communication Technology (ICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time anywhere mode.
• The Mission has two major components – providing connectivity, along with provision for access devices, to institutions and learners; and content generation.

Aims:
• The Mission aims to extend computer infrastructure and connectivity to over 25000 colleges and 2000 polytechnics in the country including each of the departments of 419 universities/deemed universities and institutions of national importance as a part of its motto to provide connectivity up to last mile.
• LAN of up to 400 nodes on average has also been envisaged to be provided to the universities under the NMEICT scheme. The Mission, in addition to utilize the connectivity network of service providers, shall explore the possibility to provide connectivity utilizing Very Small Aperture Terminal (VSAT), Virtual Private Network (VPN) and EduSat channels.

10. Nirbhaya Fund
• The Rs 1,000 crore Nirbhaya Fund was announced in Union Budget 2013.
• The corpus was to be utilised for upholding safety and dignity of women.
• The Nirbhaya Fund Framework provides for a non-lapsable corpus fund for safety and security of women to be administered by the Department of Economic Affairs (DEA) of the Ministry of Finance (MoF) of the Government of India.
• Further, it provides for an Empowered Committee (EC) of officers chaired by the Secretary, Ministry of Women & Child Development (MWCD) to appraise and recommend proposals to be funded under this framework.
• It also provides for the concerned Ministry/ Department to seek approval of the designated competent financial authority, as well as of the DEA for funding of such proposals under the Nirbhaya Framework.
• As per this framework, the MoF through DEA is the nodal Ministry for any accretion into and withdrawal from the corpus, and the MWCD is responsible to review and monitor the progress of sanctioned projects/ schemes in conjunction with the concerned Central Ministries/ Departments.

11. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
• National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was launched in 2010 in 100 districts across 21 States, in order to prevent and control the major NCDs.
• The main focus of the programme is on health promotion, early diagnosis, management and referral of cases, besides strengthening the infrastructure and capacity building.

The main strategies of the programme are as follows:
• **Health promotion through behaviour change** with involvement of community, civil society, community-based organizations, media etc.
• **Outreach Camps** are envisaged for opportunistic screening at all levels in the health care delivery system from sub-centre and above for early detection of diabetes, hypertension and common cancers.
• **Management of chronic Non-Communicable diseases**, especially Cancer, Diabetes, CVDs and Stroke through early diagnosis, treatment and follow up through setting up of NCD clinics.
• **Build capacity at various levels of health care** for prevention, early diagnosis, treatment, IEC/BCC, operational research and rehabilitation.
• **Provide support for diagnosis and cost-effective treatment** at primary, secondary and tertiary levels of health care.
• **Provide support for development of database of NCDs** through a robust Surveillance System and to monitor NCD morbidity, mortality and risk factors.

**Funding:**
• The funds are being provided to States under NCD Flexi-Pool through State PIPs of respective States/UTs, with the Centre to State share in ratio of 60:40 (except for North-Eastern and Hilly States, where the share is 90:10).
1. Particularly Vulnerable Tribal Group (PVTG)

In 1973, the Dhebar Commission created Primitive Tribal Groups (PTGs) as a separate category, who are less developed among the tribal groups. In 2006, the Government of India renamed the PTGs as Particularly Vulnerable Tribal Groups (PVTGs). **PVTGs have some basic characteristics** - they are mostly homogenous, with a small population, relatively physically isolated, social institutes cast in a simple mould, absence of written language, relatively simple technology and a slower rate of change etc.

‘Particularly Vulnerable Tribal Groups (PVTGs) are more vulnerable among the tribal groups.

- They have declining or stagnant population, low level of literacy, pre-agricultural level of technology and are economically backward.
- They generally inhabit remote localities having poor infrastructure and administrative support.

**Identification:**

In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 18 states and one Union Territory (A&N Islands) in the country (2011 census). Among the 75 listed PVTG’s the highest number are found in Odisha (13), followed by Andhra Pradesh (12).

**Scheme for development of PVTGs:**

The Ministry of Tribal Affairs implements the Scheme of “Development of Particularly Vulnerable Tribal Groups (PVTGs)” exclusively for them.

- Under the scheme, Conservation-cum-Development (CCD)/Annual Plans are to be prepared by each State/UT for their PVTGs based on their need assessment, which are then appraised and approved by the Project Appraisal Committee of the Ministry.
- Priority is also assigned to PVTGs under the schemes of Special Central Assistance (SCA) to Tribal Sub-Scheme(TSS), Grants under Article 275(1) of the Constitution, Grants-in-aid to Voluntary Organisations working for the welfare of Schedule Tribes and Strengthening of Education among ST Girls in Low Literacy Districts.

**The criteria followed for determination of PVTGs are as under:**

1. A pre-agriculture level of technology.
2. A stagnant or declining population.
3. Extremely low literacy.
4. A subsistence level of economy.

PVTGs depend on various livelihoods such as food gathering, Non Timber Forest Produce (NTFP), hunting, livestock rearing, shifting cultivation and artisan works. Most of their livelihoods depend on the forest.

2. International Day of Persons with Disabilities

It is observed every year on **December 3 to promote the rights and well-being of persons with disabilities in all spheres of society and development.**

**Key facts:**

- It was instituted by United Nations General Assembly (UNGA) in 1992.
• It aims to promote an understanding of disability issues and mobilize support for the dignity, rights and well-being of persons with disabilities.
• It also seeks to increase awareness of situation of persons with disabilities in every aspect of political, social, economic and cultural life.
• **2019 Theme:** Promoting the participation of persons with disabilities and their leadership: taking action on the 2030 Development Agenda.

3. **Study moots lowering the age of consent**
A new study calls for a need to distinguish between self-arranged marriages among older adolescents and forced child marriages to protect teens from social stigma, parental backlash and punitive action.

**What the law says?**
- Currently, the law prescribes that the minimum age of marriage is 21 and 18 years for men and women, respectively.
- The minimum age of marriage is distinct from the age of majority, which is gender-neutral.
- An individual attains the age of majority at 18 as per the Indian Majority Act, 1875.
- For Hindus, Section 5(iii) of the Hindu Marriage Act, 1955 sets 18 years as the minimum age for the bride and 21 years as the minimum age for the groom. Child marriages are not illegal but can be declared void at the request of the minor in the marriage.
- In Islam, the marriage of a minor who has attained puberty is considered valid under personal law.
- The Special Marriage Act, 1954 and the Prohibition of Child Marriage Act, 2006 also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men respectively.

4. **Randomised Controlled Trial**
It is an experiment that is designed to isolate the influence that a certain intervention or variable has on an outcome or event.

**Why is randomised controlled trial so popular?**
- At any point in time, there are multiple factors that work in tandem to influence various social events.
- RCTs allow economists and other social science researchers to isolate the individual impact that a certain factor alone has on the overall event.
- For instance, to measure the impact that hiring more teachers can have on children’s learning, researchers must control for the effect that other factors such as intelligence, nutrition, climate, economic and social status etc., which may also influence learning outcomes to various degrees, have on the final event.
- Randomised controlled trials promise to overcome this problem through the use of randomly picked samples.

**Significance:**
Many development economists believe that RCTs can help governments to find, in a thoroughly scientific way, the most potent policy measures that could help end poverty rapidly.

5. **International Day of Older Persons**
On 14 December 1990, the United Nations General Assembly designated 1 October the International Day of Older Persons. The theme of the 2019 commemoration is “The Journey to Age Equality”.

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Simplifying IAS Exam Preparation
Other initiatives in this regard:

- The Vienna International Plan of Action on Ageing – which was adopted by the 1982 World Assembly on Ageing – and endorsed later that year by the UN General Assembly.
- In 1991, the General Assembly adopted the United Nations Principles for Older Persons.
- In 2002, the Second World Assembly on Ageing adopted the Madrid International Plan of Action on Ageing, to respond to the opportunities and challenges of population ageing in the 21st century and to promote the development of a society for all ages.

6. FALL ARMYWORM (FAW)

- It is a native of the tropical and sub-tropical regions of the Americas.
- First detected in the African continent in 2016. Since then, it has spread to other countries such as China, Thailand, Malaysia and Sri Lanka.
- In India: It was reported in India for the first-time in Karnataka. Within a span of only six months, almost 50 per cent of the country, including Mizoram, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Gujarat and West Bengal, has reported FAW infestations.

What makes FAW dangerous?

- It is the polyphagous (ability to feed on different kinds of food) nature of the caterpillar and the ability of the adult moth to fly more than 100 km per night.
- Given its ability to feed on multiple crops — nearly 80 different crops ranging from maize to sugarcane — FAW can attack multiple crops.
- Similarly, it can spread across large tracts of land as it can fly over large distances. This explains the quick spread of the pest across India.

How FAW affects output?

- India has reported FAW infestation on maize, sorghum (jowar) and sugarcane crops. Maize has been the worst affected as most maize-growing states in southern India have been affected by the pest.