

**The Hindu Important News Articles & Editorial For UPSC CSE**

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The Indian government has redefined literacy to include reading, writing, computation, and critical life skills. The New India Literacy Programme (NILP) aims to onboard one crore learners annually.

- Despite progress, significant literacy challenges persist, with 25.76 crore non-literate individuals, highlighting the need for continued efforts and funding.

# Education Ministry defines 'literacy', 'full literacy' in push for adult literacy

**Maitri Porecha**

NEW DELHI

In a letter to all States, the Education Ministry has defined 'literacy', and what it means to achieve 'full literacy,' in light of a renewed push for adult literacy under the New India Literacy Programme (NILP), a five-year programme (2022-27) that aims to onboard one crore learners aged above 15 every year across all States and Union Territories.

Union School Education Secretary Sanjay Kumar, in the letter, has stated that literacy may be understood as the ability to read, write, and compute with comprehension, that is to identify, understand, interpret and create along with critical life skills such as digital and financial literacy. Full literacy (to be considered equivalent to 100%



New India Literacy Programme (NILP) aims to onboard 1 crore learners per year. GETTY IMAGES

literacy) will be achieving 95% literacy in a State or Union Territory.

Mr. Kumar further writes that a non-literate person may be considered as literate under the NILP, as per the aforementioned definition when he/she has been declared literate after taking the Foundational Literacy and Numeracy Assessment Test (FLNAT).

According to data ac-

cessed by *The Hindu*, in 2023, 39,94,563 adult learners appeared for FLNAT in March and September, out of which 36,17,303 were certified 'literate'.

In 2024, FLNAT was conducted on March 17, in which 34,62,289 learners appeared.

However, only 29,52,385 (85.27%) were certified as literate. While the pass percentage in FLNAT hovered between 89.64% and 91.27% in 2023, in 2024 it has dropped lower to 85.27%.

In 2024-25, the Ministry has allocated a budget of ₹160 crore for NILP. According to the latest Union Budget document, only ₹76.41 crore was actually utilised towards the scheme in 2022-23.

In 2023-24, the allocation was hiked to ₹157 crore, but later brought down to ₹100 crore in the

revised estimates of the Union Budget.

## Significant challenge

According to the 2011 Census, India faces a significant literacy challenge with 25.76 crore non-literate individuals in the age group of 15 years and above, comprising 9.08 crore males and 16.68 crore females.

Despite the progress made under the Saakshar Bharat programme, which certified 7.64 crore individuals as literate between 2009-10 and 2017-18, an estimated 18.12 crore adults in India remain non-literate. The letter says non-literate individuals face disadvantages in various aspects of life such as financial transactions, job applications, understanding of rights and participation in higher productivity sectors.

## New Definition of Literacy

- The government defines literacy as the ability to read, write, and compute with comprehension, including critical life skills like digital and financial literacy.

- Full literacy is achieved when a State or Union Territory

reaches 95% literacy.

- Individuals are considered literate under the NILP if they pass the Foundational Literacy and Numeracy Assessment Test (FLNAT).

### **Foundational Literacy and Numeracy Assessment Test (FLNAT):**

- FLNAT is a nationwide assessment conducted in India to evaluate the foundational literacy and numeracy skills of registered non-literate learners.
- It assesses reading, writing, and numeracy skills in regional languages, aligned with the National Education Policy 2020.
- Learners who qualify receive a certificate from the National Institute of Open Schooling (NIOS), recognizing their achievement in foundational literacy and numeracy.

### **Statistical Data on Literacy in India**

- **2011 Census:** India had 25.76 crore non-literate individuals aged 15 and above, with 9.08 crore males and 16.68 crore females.
- **Saakshar Bharat:** Certified 7.64 crore individuals as literate between 2009-10 and 2017-18.
- **2023 FLNAT:** 39,94,563 adult learners appeared, with 36,17,303 certified as literate.
- **2024 FLNAT:** 34,62,289 learners appeared, and 29,52,385 (85.27%) were certified, down from 89.64% to 91.27% in 2023.

## **UPSC Prelims PYQ : 2018**

### **Ques : Consider the following statements:**

1. As per the Right to Education (RTE) Act, to be eligible for appointment as a teacher in a State, a person would be required to possess the minimum qualification laid down by the concerned State Council of Teacher Education.
2. As per the RTE Act, for teaching primary classes, a candidate is required to pass a Teacher Eligibility Test conducted in accordance with the National Council of Teacher Education guidelines.
3. In India, more than 90% of teacher -5 education institutions are directly under the State Governments.

### **Which of the statements given above is/are correct?**

- (a) 1 and 2
- (b) 2 only
- (c) 1 and 3
- (d) 3 only

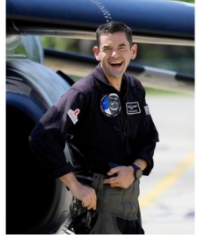
**Ans: b)**

SpaceX's Polaris Dawn mission will be the first private spacewalk, featuring new technology such as slim spacesuits and a modified Crew Dragon with no airlock.

- Launching on Tuesday, it aims to reach altitudes of 700 km, testing equipment in high-radiation environments and marking a significant private spaceflight milestone.

**More information about SpaceX Mission:**

- SpaceX's Polaris Dawn mission introduces innovative spacewalk technology.
- It features new slim spacesuits and a modified Crew Dragon vehicle capable of opening its hatch door directly into space, eliminating the need for an airlock.
- This mission, launching a billionaire, a retired fighter pilot, and two SpaceX engineers, aims to reach 700 km altitude, well beyond the ISS.
- Crew Dragon and spacesuits will be tested against high-radiation environments in the Van Allen belt.



Jared Isaacman at Kennedy Space Center ahead of the private human spaceflight mission. AP

**SpaceX to test new tech in risky private spacewalk**

Reuters

SpaceX's attempt at the first-ever private spacewalk will be a test of trailblazing equipment, including slim spacesuits and a cabin with no airlock, in one of the riskiest missions yet for Elon Musk's space company.

A billionaire entrepreneur, a retired military fighter pilot, and two SpaceX employees are poised to launch on Tuesday aboard a modified Crew Dragon craft, before embarking on a 20-minute spacewalk 700 km into space two days later.

Until now, walking into the empty expanse of space has only been attempted by government astronauts on the

SpaceX's five-day mission, dubbed 'Polaris Dawn', will swing in an elliptical orbit, and will go the farthest from earth any humans will have ventured since the end of NASA's Apollo programme in 1972.

International Space Station (ISS), 400 km up.

SpaceX's five-day mission, dubbed 'Polaris Dawn', will swing in an elliptical orbit, passing as close to the earth as 190 km and as far as 1,400 km, the farthest any humans will have ventured since the end of NASA's Apollo programme in 1972.

Retired NASA astronaut Garrett Reisman said in an interview that the crew is going to "a much higher altitude, with a more severe radiation environment than we have been to since Apollo."

Crew members will don SpaceX's new spacesuits in a Crew Dragon vehicle modified to open its hatch door in the vacuum of space, an unusual process that removes the need for an airlock.

The mission has been bankrolled by Jared Isaacman, the founder of electronic payment company Shift4. He has declined to say how much he has spent but it is estimated to be over \$100 million.

Joining him will be mission pilot Scott Potvet, a retired U.S. Air Force lieutenant colonel, and senior SpaceX engineers Sarah Gillis and Anna Menon.

Far outside the protective bubble of the earth's atmosphere, the electronics and shielding on Crew Dragon and spacesuits will be tested as they pass through parts of the Van Allen belt, an area where charged particles streaming mainly from the Sun can disrupt satellites' electronics and affect human health.

The Polaris spacewalk will take place on the mission's third day but preparation will begin about 45 hours in advance.

Crew Dragon's cabin will be depressurised and exposed to the vacuum of space. While only two of the astronauts will float outside, tethered by an oxygen line, the whole crew will depend on their spacesuits for life support. Days before the spacewalk, the crew will begin a "pre-breathe" process to fill the cabin with pure oxygen and remove any nitrogen from the air.

While astronaut safety on NASA missions is rigorously overseen by the agency, there are no such U.S. standards or laws for spaceflight safety in private missions like Polaris.

SpaceX officials and the Polaris crew said during a Monday news conference they have planned for an array of contingency scenarios if something during the mission goes wrong, such as an oxygen leak or failure to reseal the hatch door, but they didn't detail what those were.

**UPSC Prelims PYQ : 2018**

**Ques : With reference to India's satellite launch vehicles, consider the following statements:**

1. PSLVs launch the satellites useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
2. Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
3. GSLV Mk III is a four-staged launch vehicle with the first and third stages using solid rocket motors, and the second and fourth stages using liquid rocket engines.

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 and 3
- (c) 1 and 2
- (d) 3 only

**Ans: a)**

This article explains how common medical instruments like thermometers, stethoscopes, weighing scales, and sphygmomanometers function scientifically, detailing their mechanisms in healthcare for accurate measurements.



GETTY IMAGES

## The working behind some simple medical tools one sees in a doctor's office

How do thermometers, stethoscopes, weighing scales, and sphygmomanometers work? A sphygmomanometer is a device that monitors blood pressure. The manual version consists of an inflatable cuff and a manometer, the part that measures pressure

Vasudevan Mukunth

**W**hen you visit your doctor for a consultation, they need to get a sense of how well your body is. Thanks to the thermometer, the stethoscope, the weighing scale, and the sphygmomanometer, you only need a few minutes to acquire this data.

### What is a thermometer?

A thermometer is a device to measure the temperature of an object. Every thermometer has a part that is sensitive to changes in temperature and another that shows these changes as numbers.

In the once-ubiquitous mercury thermometer, a small amount of mercury in a glass bulb is the temperature sensor. Its rise and fall in response to temperature changes happens in a glass capillary marked with numerical values. When the mercury bulb is brought in contact with a warmer object, the liquid expands and rises up through the capillary. The number next to its level is the object's temperature.

This relationship between the temperature and the mercury's level requires mercury thermometers to be carefully calibrated such that the capillary's width, the mercury's temperature, and the markings on the scale match each other. It's also important that the volume of the material in the bulb varies linearly by the temperature. That is, if it expands by 1 unit for every 1°C change in temperature, it should do so by 10 units for a 10°C change.

Researchers have developed thermometers today that use digital

components to infer the temperature. For example, thermal guns of the sort used to check the temperatures of people entering malls and supermarkets during the COVID-19 pandemic contains a detector that interprets the radiant power of a warm body as changes in the voltage or resistance in a circuit, and uses that to produce a temperature readout.

Another common type of thermometer is the thermistor: a semiconductor whose resistance is sensitive to changes in temperature. Thermistor-based thermometers have become a common sight in clinics and hospitals.

### What is a stethoscope?

The stethoscope consists of a diaphragm at one end and an earpiece at the other, with a tube connecting the two. When the diaphragm is placed against the skin, sounds inside the body near that area cause the diaphragm to vibrate, creating pressure waves in the air filling the tube that are transmitted via the earpiece to a listener.

The piece that holds the diaphragm has a bell-shaped opposite side. The diaphragm is better to pick up high-frequency sounds while the bell is suited for low-frequency ones.

Stethoscopes also have electronic versions with additional features. A particularly important one is sound amplification, to help the listener interpret sounds too faint to hear in an acoustic stethoscope.

Some companies have developed stethoscopes that can collect sound data, analyse it for signs of certain heart conditions, and transmit the results wirelessly to a smartphone.

### How do weighing scales work?

Perhaps the simplest of (today's) weighing scales is the spring scale, a common sight in clinics, houses, and grocery stores.

The centrepiece of this device is a spring. When the spring is placed under a plate and an object is placed on top of the plate, the device is calibrated to measure the force exerted by the object based on how much the spring is compressed.

Alternatively, the spring can be attached to a hook at the bottom from which an object can be suspended. The object's force is calculated based on how much the spring is stretched.

The operator needs to make sure the spring works as expected at regular intervals and to calibrate the weighing scale at the location where it's going to be used, rather than somewhere else, to account for local variations in gravity.

An analog weighing scale translates the spring's deformation to a weight measure by a straightforward calibration. An electronic weighing scale uses a force transducer instead. Two common ones are load cells and strain gauges. A load cell is a circuit that, when a voltage is applied, transmits different amounts of current depending on the weight acting on it. A strain gauge is a conductor whose resistance changes depending on its length.

### What is a sphygmomanometer?

A sphygmomanometer is a device that monitors blood pressure. The manual version consists of an inflatable cuff and a manometer, the part that measures pressure. The cuff is strapped around an individual's arm, at roughly the same height as the heart. The pressure inside

the cuff is increased by pumping a bladder of air. The doctor or nurse keeps track of the cuff pressure by its link to the manometer, which measures pressure as the level of mercury in a capillary (like in a mercury thermometer). The worker also places a stethoscope over the brachial artery, the main artery bringing blood to the upper arm.

When the pressure in the cuff reaches a suitably high value, the artery will be pinched off and blood flow will stop. The worker then slowly releases the pressure in the cuff. When the pressure in the artery drops enough to allow blood to flow, a whooshing sound is heard via the stethoscope. The manometer reading at this point is the systolic pressure. When the whooshing sound stops altogether, the manometer reading is the diastolic pressure. The whooshing is called the Korotkov sound, for the physician Nikolai Korotkov, who discovered it in 1905.

Electronic sphygmomanometers automate this process with a slight difference. When the pressure in the cuff is neither too high to stop blood flow nor too low to let it flow unimpeded, and partly restricts flow, the cuff pressure will oscillate over a small range in sync with the expansion and contraction of the artery. The device uses this oscillation to calculate blood pressure.

Electronic sphygmomanometers require less skill to operate but they are also less accurate than the mechanical, mercury-based version, which are preferred during clinical trials. In particular, electronic devices may not provide accurate readouts when the individual has a pulse-related abnormality such as pulsus paradoxus or arrhythmia.

➤ Here is the list of tools used in a Doctor's Diagnosis:

	<b>Function</b>	<b>Description and Working Principle</b>
<b>Thermometer</b>	<b>Measures body temperature.</b>	<ul style="list-style-type: none"> <li>➤ <b>Mercury Thermometer:</b> Features a mercury-filled bulb and a glass capillary with numerical markings. Temperature changes cause the mercury to expand or contract, moving through the capillary to indicate temperature.</li> <li>➤ <b>Digital Thermometer:</b> Utilizes sensors like infrared or thermistors to detect temperature changes, which are then converted into digital readings.</li> </ul>
<b>Stethoscope</b>	<b>Listens to internal body sounds.</b>	<ul style="list-style-type: none"> <li>➤ <b>Acoustic Stethoscope:</b> Comprises a diaphragm for high-frequency sounds and a bell for low-frequency sounds, connected by a tube to earpieces.</li> <li>➤ <b>Electronic Stethoscope (Stethophone):</b> Amplifies body sounds electronically and may include recording capabilities and additional diagnostics such as electrocardiograms. These devices transmit sound data to smartphones or other devices.</li> </ul>
<b>Weighing Scale</b>	<b>Measures body weight.</b>	<ul style="list-style-type: none"> <li>➤ <b>Spring Scale:</b> Uses a spring under a plate; weight is measured by the degree of spring compression or extension. Requires calibration to account for local gravity</li> </ul>

		<p>variations.</p> <p>➔ <b>Electronic Scale:</b> Converts the mechanical force of weight into electrical signals using load cells or strain gauges, displayed as weight readings on a digital screen.</p>
<b>Sphygmomanometer</b>	<b>Measures blood pressure.</b>	<p>➔ <b>Manual Sphygmomanometer:</b> Includes an inflatable cuff, linked to a mercury or aneroid manometer. Uses a stethoscope to detect blood flow sounds (Korotkov sounds) for determining systolic and diastolic pressures.</p> <p>➔ <b>Electronic Sphygmomanometer:</b> Uses oscillometric technology to sense pressure oscillations caused by arterial blood flow, automating blood pressure measurement. Easier for home use but may have accuracy issues in patients with certain cardiovascular conditions.</p>

**UPSC Prelims PYQ : 2019**

**Ques: In the context of wearable technology, which of the following tasks is/are accomplished by wearable devices?**

1. Location identification of a person
2. Sleep monitoring of a person
3. Assisting the hearing-impaired person

Select the correct answer using the codes given

**below:**

- (a) 1 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

**Ans : d)**





Page 13 : GS 3 : Indian Economy : Infrastructure – Railways

Indian Railways is pursuing Net Zero carbon emissions by 2030, exploring nuclear and renewable energy sources, including solar and wind power.

- It aims for 30,000 MW of renewable capacity, partnering with various organisations to reduce operating costs and dependence on fossil fuels.

**About the news:**

- Indian Railways aims to achieve Net Zero carbon emissions by 2030 and plans to install 30,000 MW of renewable energy capacity by 2029-30.
- The Railways is exploring the use of captive nuclear power alongside solar, wind, and hydel energy to reduce fossil fuel dependence.
- The Railways plans to establish its own captive power generating units, including small reactors, to lower operating costs.
- It spends approximately ₹20,000 crore annually on electricity for trains and its facilities.
- In 2023, the Railways commissioned 147 MW of solar power and 103 MW of wind power, with an additional 2,150 MW of renewable capacity secured.

**Potential for renewable energy in Indian Railways**

**Prospects:**

- **Substantial Capacity:** Indian Railways aims to deploy 30,000 MW of renewable energy by 2029-30, which includes solar, wind, and hydel power.
- **Environmental Impact:** Transitioning to renewables will significantly reduce greenhouse gas emissions, contributing to India's climate goals and enhancing environmental sustainability.
- **Energy Independence:** By investing in captive renewable energy units, the Railways can achieve greater energy security and reduce dependency on fossil fuels.
- **Technological Advancements:** Advances in renewable technology and decreasing costs make the large-scale adoption of solar and wind power more feasible.

## Railways eyes nuclear energy



**Power guzzler:** Railways, the largest power consumer, spends ₹20,000 cr. a year to run trains, establishments. AFP

**Abhishek Law**  
NEW DELHI

The Indian Railways is exploring the possibility of using captive nuclear power as it seeks to cut fossil fuel use and step up renewable resources.

The Railways aims at achieving Net Zero carbon emissions by 2030. To reach this goal, it estimates requiring 30,000 MW of renewable energy capacity by 2029-30.

Apart from nuclear power, the Railways is already in the process of commissioning solar and wind-based power units. Hydel power would also be tapped. In all cases, the public sector behemoth would look at having captive power generating units.

Senior officials told *businessline* discussions would be taken up with the Nuclear Power Corporation of India (NPCIL) shortly. For renewable power, the Railways is exploring partnerships with Solar Energy Corporation of India (SECI), NTPC, the Ministry of New and Renewable Energy (MNRE), among others.

"In each case, we will look to have our own captive use power plants, small reactors, captive power generating units and so on. Work is going on on the revenue model, or purchase pact. Obviously, we will look at a lower cost model so that operating costs come down," the official said.

"The Railways plans to procure renewable energy via different power procurement modes for its energy requirements," the official said.

The Railways is the largest consumer of electricity and spends close to ₹20,000 crore annually to run trains and its establishments.

In 2023, about 147 MW solar plants and about 103 MW wind units were commissioned, with another 2,150 MW renewable capacity tied up.

(The writer is with *The Hindu businessline*)

➤ **Nuclear energy:** It offers a reliable, low-carbon power source, essential for achieving significant emission reductions and supporting large-scale renewable integration.

**Challenges:**

- **Initial Investment:** High upfront costs for setting up renewable energy infrastructure and captive power units can be a financial burden
- **Intermittency:** Solar and wind energy are intermittent sources, requiring effective energy storage solutions to ensure consistent power supply.
- **Infrastructure Development:** The need for new infrastructure and upgrades to integrate renewable energy into existing systems can be complex and time-consuming.
- **Regulatory Hurdles:** Navigating regulatory frameworks and obtaining necessary approvals for new projects can delay implementation.
- **Maintenance and Operational Costs:** Managing and maintaining renewable energy systems, including potential issues with technology reliability, requires ongoing investment..

**UPSC Mains PYQ : 2014**

**Ques:** The setting up of a Rail Tariff Authority to regulate fares will subject the cash strapped Indian Railways to demand subsidy for obligation to operate non-profitable routes and services. Taking into account the experience in the power sector, discuss if the proposed reform is expected to benefit the consumers, the Indian Railways or the private container operators.

## Term In News : Unified Lending Interface

The Reserve Bank is piloting an application for frictionless credit —Unified Lending Interface (ULI). It will be launched nationwide soon and will become the UPI on the credit side.

### Unified Lending Interface (ULI)

#### ➔ Background

- In August 2023, the RBI initiated a pilot project for a public tech platform designed to streamline credit processes, aiming to reduce costs, expedite disbursements, and enhance scalability.
- Recently, RBI Governor proposed naming this platform the Unified Lending Interface (ULI).
- He expressed that, much like UPI revolutionized the payments ecosystem, ULI is expected to similarly transform the lending landscape in India.



#### ➔ Need for ULI

- India's rapid digitalization has led to the development of digital public infrastructure, encouraging innovation in payments, credit, and financial services by banks, NBFCs, fintech companies, and start-ups.
- However, the necessary data for credit appraisals is scattered across various systems, creating obstacles to smooth and timely lending.

#### ➔ About

- ULI will enable a seamless, consent-based flow of digital information, including state land records, from multiple sources to lenders.
- This will expedite credit appraisals, particularly benefiting smaller and rural borrowers.
- The ULI platform, with its standardized APIs, will simplify technical integrations and reduce the need for extensive documentation, making credit delivery quicker and more efficient.
- It is designed for a plug-and-play approach to enable quicker access.
- ULI improves digital access from diverse sources for lenders. The ecosystem is based on the consent of potential borrowers and data privacy is protected.

#### ➔ Benefits

- ULI will address the large unmet demand for credit, especially in agriculture and MSME sectors, by digitizing access to financial and non-financial data currently housed in separate systems.

○ Experts claim that the combined impact of JAM (Jan Dhan, Aadhar, Mobile), UPI, and ULI as a significant advancement in India's digital infrastructure.

### **Unified Payments Interface (UPI)**

#### ➤ **About**

- UPI is a system that powers multiple bank accounts into a single mobile application (of any participating bank).
- It does so by merging several banking features, seamless fund routing & merchant payments into one hood.
- In other words, UPI is an interface via which one can transfer money between bank accounts across a single window.
- It was launched in 2016, by the National Payments Corporation of India (NPCI).

#### ➤ **Features of UPI**

- Immediate money transfer through mobile device round the clock 24\*7 and 365 days
- Single mobile application for accessing different bank accounts
- Hassle free transactions as customers are not required to enter the details such as Card no, Account number, IFSC etc.

#### ➤ **Benefits of UPI**

##### ○ **For Banks**

- A universal application for one transaction;
- A single click Two Factor authentication;
- Safer and more secure; Enables easy transactions;
- Unique Identifier

##### ○ **For Merchants**

- Easier fund collection; In-App Payments (IAP)
- No risk of storing the customer's virtual address;
- Tap customers not having credit/debit cards

##### ○ **For Customers**

- Single application for accessing various bank accounts;
- Round the clock availability;
- One can easily raise a complaint from the mobile app directly;
- Use of Virtual ID is secure

### **UPI Transaction: Statistics**

- According to National Payments Corporation of India (NPCI) data, payments using UPI were at Rs 20,64,292.40 crore in value in July 2024.
- The total transaction count was 14,435.55 million in July 2024.

**Page : 08 Editorial Analysis**

# Crime, health-worker safety and a self-examination

The year 2017 saw heated protests by resident doctors in Maharashtra, following a series of vicious attacks on medical personnel in rather quick succession – as is invariably the case with sensationalised criminal offences. Despite the magnitude of the problem, the solution was straightforward and run-of-the-mill. It meant bolstering security in public hospitals and strengthening legal instruments to bring the malefactors to rapid justice. Similar incidents came and went, with much happening during the COVID-19 pandemic. The knee jerk responses too continued. One is hard-pressed to recall any conspicuous precedents of swift justice.

**There lies a deeper problem**

It is the case of the grisly death of a promising resident doctor in Kolkata that has taken the country by storm and that has spurred the Supreme Court of India to take *suo moto* cognisance of the happening. However, emerging answers to the issue continue to remain reflexive and simplistic, and possibly reflect an incomplete understanding of the malady beneath. In its proceedings on August 20, the Court decreed the constitution of a national task force to work out measures to strengthen hospital safety. Improved infrastructure and closed-circuit television surveillance, a greater security presence at hospitals, and safe night transport are reportedly some areas that will receive attention.

In the same vein, the West Bengal government has announced the 'Rattier Saathi (night companion)' programme aimed at improving the safety of women working in night shifts, particularly in medical colleges and hospitals. While such initiatives are critical, they implicitly conflate this issue with archetypal health worker violence, which is initiated by disgruntled patients due to perceived poor health-care services, or women's safety at large. What lurks underneath is the much more insidious problem of corruption of criminal proportions.

Conventional answers to health worker



**Dr. Soham D. Bhaduri**

a public health specialist and an independent researcher

Emerging answers to the issue of health-worker safety continue to remain reflexive and simplistic, and could show an incomplete understanding of the malady beneath

violence, such as improving hospital security and newer legislation, have miserably failed in tackling the problem over the years. These include reasons such as underfunding which are no different than why our health systems continue to remain frail in general. But the extent to which corruption contributes to the overall loss of lives has been vastly under-appreciated. If emerging accounts are anything to go by, there is a strong likelihood of deep-rooted, organised corruption having contributed to the gruesome crime in question, not to mention other incidents and the steady erosion of public health services that may have hitherto gone unheeded. The fact that this concerns an apex health-care institution in an already underfunded state public health system is acutely disconcerting.

**WHO estimates**

The World Health Organization estimates that corruption claims nearly \$455 billion annually worldwide, more than what it would cost to extend universal health coverage to all. In a good part of the developing world, corruption rather than a lack of funds is what majorly contributes to health-care crises and poor health outcomes. While often sensationalised, the discourse on medical corruption in India has largely concentrated on private losses and malfeasancess, while its criminal dimensions have been largely underappreciated. Human resource-intensive health-care systems provide rapid breeding grounds for expansionary corruption, including the worst forms of sextortion, particularly in political systems where underfunding and poor oversight run rife.

In such circumstances, it is hard to conceive how much help would realistically accrue from merely improving the state of health workers' security and hospital infrastructure, even if they are somehow adequately implemented. Being painfully galvanised to the fact that medical corruption can claim the lives of health-care

workers in addition to that of patients serves to indicate that the public health system and its drivers may be up for a rigorous self-examination.

Speedy delivery of justice in the Kolkata case is inarguably paramount, for nothing else said or done can ever serve as a consequential deterrent. Needless to say that we have traditionally fallen short in this respect, and the ramifications are for all to see.



**The steps that are needed**

But the national task force has a job that is arguably more monumental than simply recommending safety measures – which is to devise a potent road map to prevent and arrest medical corruption, particularly in the public sector. Certainly, this cannot be

approached solely by a team of medical doctors. It requires expert inputs from public health, medico-legal, and other allied competencies, besides meriting the participation and the sanction of the larger governing and administrative community. And, the strategies so devised have to look much beyond instituting yet another novel legislative tool.

Apart from reforms centering on administrative transparency, accountability, and oversight, effective whistle-blower reporting and protection mechanisms and thorough digitalisation of public management systems are crucial. The need for ombudsmanship and other instruments to minimise political intrusion and manoeuvring cannot be overstated. Inspiration may be drawn from how fellow nations such as Brazil continue to battle political corruption in medicine.

Much also remains to be done in the way of modernising the typical 'control and command' Indian public hospital, which remains steeped in anachronistic ways. While efficiency reasons for such a modernisation abound, their pressing moral and regulatory bases have glaringly presented today and can no longer be overlooked.

**GS Paper 02 : Social Justice – Vulnerable sections**

**(UPSC CSE (M) GS-2 : 2018)** Appropriate local community level healthcare intervention is a prerequisite to achieve 'Health for All' in India. Explain (150 w/10m)

**UPSC Mains Practice Question** Examine the role of corruption in undermining public healthcare in India, with a focus on recent incidents of violence against healthcare workers. Suggest comprehensive reforms to address this issue. (250 w /15 m)

## **Context :**

- The article addresses the rising violence against healthcare workers in India, particularly following the death of a doctor in Kolkata.
- It critiques the conventional focus on hospital security and calls for deeper reforms to tackle systemic corruption in public healthcare, emphasising the need for transparency, oversight, and accountability.

## **Response to Violence**

### **Background:**

- In 2017, Maharashtra witnessed protests from resident doctors following multiple attacks on medical personnel.
- The immediate solutions included improving hospital security and strengthening legal mechanisms to punish offenders.
- Despite these efforts, swift justice in such cases has rarely been seen, with incidents continuing even during the COVID-19 pandemic.

### **Deeper Underlying Problem**

- The brutal death of a resident doctor in Kolkata has led the Supreme Court of India to take suo moto cognisance of the matter.
- While the response, such as the creation of a national task force, focuses on improving hospital safety (e.g., better infrastructure, CCTV surveillance, and night transport for medical workers), the measures fail to address the deeper issue: corruption.
- The West Bengal government introduced the 'Rattierer Saathi' program to enhance safety for women in night shifts, but this too seems to conflate the issue with general health worker violence.

### **Conventional Solutions Fall Short**

- The conventional responses, such as improved hospital security and new legislation, have failed to address the root causes of violence against health workers.
- The real problem lies in corruption, particularly in underfunded public health systems.
- Organised corruption may have contributed to the Kolkata incident and other similar cases, with disastrous consequences for both health workers and patients.

## **Systemic Corruption**

### **WHO Estimates on Corruption in Healthcare**

- The WHO estimates that corruption costs around \$455 billion annually worldwide, a figure greater than what is required for universal health coverage.
- In developing countries, corruption, rather than a mere lack of funds, is a major factor contributing to healthcare crises and poor outcomes.
- While discussions about medical corruption in India often focus on private losses, its criminal aspects, particularly in public healthcare, have been largely ignored.

➤ Corruption in the public healthcare system, including issues like sextortion, thrives in an environment of underfunding and poor oversight.

### **Limitations of Current Safety Measures**

- Improving security for health workers and modernising hospital infrastructure, while important, will not be sufficient to tackle the problem of corruption.
- The Kolkata case highlights how medical corruption can lead to the deaths of healthcare workers as well as patients, underscoring the urgent need for reforms in the public health system.

### **Need for Comprehensive Reform**

#### **Need for Broader Reforms**

- The national task force's role should extend beyond safety measures; it must develop a roadmap to prevent and tackle medical corruption, particularly in the public sector.
- This effort requires input from multiple fields, including public health and legal experts, as well as broader participation from governance and administration.

#### **Key Reforms Needed**

- Reforms must include enhancing transparency, accountability, and oversight in healthcare administration.
- Effective whistle-blower protection mechanisms, along with the digitisation of public management systems, are essential.
- Instruments like ombudsmanship and measures to reduce political interference are also crucial.
- Cues can be taken from countries like Brazil for inspiration in battling political corruption in medicine.

#### **Modernising Public Hospitals**

- India's public hospitals, which often operate on outdated management models, need modernisation.
- Beyond efficiency, the moral and regulatory reasons for modernisation are now critical and cannot be ignored.

#### **Conclusion**

- While strengthening hospital security is necessary, it is insufficient to address the root cause of violence against healthcare workers.
- Comprehensive reforms targeting systemic corruption, transparency, and accountability in public healthcare are crucial to ensure the safety of medical personnel and improve overall health outcomes in India.

#### **Deeper problem in the Health Care Sector:**

- **Healthcare Violence:** The protests by resident doctors stem from a series of violent attacks against medical personnel. This violence often arises from disgruntled patients and their families who perceive poor healthcare services.

➤ **Corruption in Healthcare:** The World Health

Organization estimates that corruption claims nearly \$455 billion annually, which could otherwise extend universal health coverage globally.

- In India, this corruption manifests in various forms, including bribery and sextortion, further undermining the healthcare system's integrity.
- **Ineffective Responses:** Traditional responses to healthcare violence, such as enhancing security and legal measures, have proven inadequate. These knee-jerk reactions fail to address the root causes of the violence.

**Present Scenario of Legal Protection to Healthcare Professionals**

- No central law existed to safeguard healthcare workers nationwide.
- As of 2020, 19 States had implemented their statutes, each with varying provisions. Other States and Union Territories had no laws at all.
- This lack of uniformity meant protection is inconsistent.
- Among States, Kerala and Karnataka now provide their healthcare workers with the most robust legal protections in India.
- Challenges in enacting a Central law: A central law has not been enacted because public health is a State subject, and VAHCW is primarily a public health-related issue.
- While the concurrent list allows for a central law, the central government has not prioritised this issue, leaving it to the States to manage.

**Way Ahead**

- **Strengthen the System:** To eliminate this 'threat', we must spend more money to strengthen the system from the grassroots level, such as reducing long waiting periods for treatment.
  - The availability and accessibility of medicines, tests, and financial aid for those in need will greatly reduce their stress, instead of leaving them to hold their physicians responsible for it.
- **Policy and Institutional Measures:** Installing CCTV cameras and metal detectors at hospital entrances to deter relatives from carrying weapons are workable, but they are currently easier to realise in private settings and not at public facilities.
  - Ensuring that there are counselors to help patients and relatives in times of high emotional distress can eliminate any miscommunication regarding a patient's condition and treatment.
  - In addition, a robust security system and not allowing more than a few relatives by a patient's bedside may also be important.
  - After the West Bengal incident, the Central Government has declared that it will form a high-level committee to review the 2019 bill tabled in parliament for making the Central Act for protection of healthcare workers.
  - Until a central law becomes a reality, these State-level reforms represent a significant step forward in safeguarding those who dedicate their lives to caring for others.



## Asian Infrastructure Investment Bank

- The Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia.
- It is established by the AIIB Articles of Agreement (entered into force Dec. 25, 2015) which is a multilateral treaty. The Parties (57 founding members) to agreement comprise the Membership of the Bank.
- It is headquartered in Beijing and began its operations in January 2016.
- By the end of 2020, AIIB had 103 approved Members representing approximately 79% of the global population and 65% of global GDP.
- By investing in sustainable infrastructure and other productive sectors in Asia and beyond, it will better connect people, services and markets that over time will impact the lives of billions and build a better future.



### Objectives of AIIB

- To foster sustainable economic development, create wealth and improve infrastructure connectivity in Asia by investing in infrastructure and other productive sectors.
- To promote regional cooperation and partnership in addressing development challenges by working in close collaboration with other multilateral and bilateral development institutions.
- To promote investment in the public and private capital for development purposes, in particular for development of infrastructure and other productive sectors.
- To utilize the resources at its disposal for financing such development in the region, including those projects and programs which will contribute most effectively to the harmonious economic growth of the region,
- To encourage private investment in projects, enterprises and activities contributing to economic development in the region when private capital is not available on reasonable terms and conditions.

### Financial Resources of AIIB

- The AIIB's initial total capital is USD 100 billion divided into 1 million shares of 100 000 dollars each, with 20% paid-in and 80% callable.
- **Paid-Up Share Capital:** It is the amount of money that has already been paid by investors in exchange for shares of stock.
- **Called-Up Share Capital:** Some companies may issue shares to investors with the understanding they will be paid at a later date.
- This allows for more flexible investment terms and may entice investors to contribute more share capital than if they had to provide funds up front.
- China is the largest contributor to the Bank, contributing USD 50 billion, half of the initial subscribed capital.
- India is the second-largest shareholder, contributing USD 8.4 billion.