

UPSC Daily Current Affairs| Prelim Bits 13-03-2025

Polypharmacy

Why in News?

A cross-sectional study conducted among 600 older adults across 6 Indian cities has found that the prevalence of polypharmacy and unsafe self-medication is high in this population.

- **Polypharmacy** - Refers to the intake of 5 or more medications per day.
- **Prevalence** - The *highest prevalence of polypharmacy was found in Guwahati (57%), while Madhya Pradesh (Ujjain) had the lowest prevalence (11.7%).*
- **Impact** - The prevalence of polypharmacy was 33.7% with significant associations to multiple comorbidities, (2 or More Disease) causing hospitalization.
- **Survey Conducted by** - Researchers from various institutes such as Department of Global Public Health, Karolinska Institutet, Stockholm, Sweden and the Indian Council of Medical Research.
- **Older Persons' Prescriptions and Screening Tool to Alert to Right Treatment (STOPP-START)** - An updated screening tool that was used in the survey to:
 - Identify potentially inappropriate medications (PIM) and potential prescribing omissions (PPO) respectively.
- The study found the proportion of prescriptions with PIM and PPO were 28.8% and 20.3% respectively.
- The highest prevalence of PIM use is 46.2% and it was attributed to medications prescribed without evidence-based clinical indications and those prescribed beyond the recommended duration.
- **Key findings of the survey** - 25.2% of the individuals used at least one fixed-drug combination (solid oral formulations).
- The most common combinations were antihypertensive and antidiabetic fixed-drug combinations.
- The prevalence of self-medication was 19.7%, associated with factors, such as staying alone, multiple comorbidities and recent hospitalizations.
- The most common medicines that were self-medicated were nonsteroidal anti-inflammatory drugs (59%).
- It was followed by paracetamol (42.4%) and antibiotics for upper respiratory tract infection and diarrhoea (33.9%).
- A lack of awareness and unsafe practices were found among self-medicating individuals.
- Among those who self-medicated, 65.3% lacked knowledge of self-medication, 50% did not comprehend the risks and 40.7% reported unsafe self-medication practices.
- **Prevention** - To promote safe medication use in older adults.
- Lack of interventions in creating awareness and establishing services for medication reconciliation, review and feedback.

Reference

1. [The Hindu | Polypharmacy](#)

Ocelot

Why in News?

Recently, fewer than 100 ocelots in the United States are feline species which are in the face of extinction.

A **feline** is a member of the cat family Felidae, which includes lions, tigers, cheetahs, leopards, pumas, and lynxes.

- **Ocelot** - It is a **medium-sized wildcat**, which is twice the size of the average house cat.
- **Scientific Name** - Leopardus Pardalis.
- **Habitat** - Tropical and subtropical rainforests, mangrove swamps, savannas, semi-arid thorn scrub, brushlands, tree branches, or inside a hollow tree.
- **Distribution** - Found in **Mexico, Central America and Northern Argentina in South America.**
- **Morphology** - It has *beautiful fur coats* covered with a pattern of rosettes, stripes & spots, and fur is golden with black or dark brown doughnut-shaped spots that are tan in the middle.
- Eyes have a layer that reflects light, the neck and belly are white, rounded ears, and a short tail ringed with black or black bars.



- **Sexual dimorphism** - Male is slightly lighter and longer than female.
- **Behaviour** - It is a typically solitary and nocturnal cat.
- It is a good swimmer, climber & jumper.
- They communicate with each other using body language, scent marking, and vocalizations.
- **Diet** - Feed on rabbits, rodents, iguanas, fish, frogs, crabs, snakes, lizards, baby peccaries, young deer, monkeys or birds.
- **Threats:**
 - Hunted for their fur or skins.

- Human encroachment, large cities being built and roadways.
- **Conservation status**
 - **IUCN** - Least Concern.
 - **CITES** - Appendix I.(Species that are the most endangered).

Ocelot subspecies, known as the Texas ocelot (Leopardus pardalis albescens), is endangered.

References

1. [The Hindu| Decrease in Ocelots Population in the US](#)
2. [National Geographic| Ocelot](#)
3. [SDZWA| Ocelot](#)

India's Road Safety Crisis

Why in News?

The Ministry of Road Transport and Highways declared January 2025 as Road Safety Month, calling on all stakeholders to collaborate to make roads safer.

- **Road Safety Crisis** - With approximately 11.9 lakh global road fatalities annually and road traffic crashes being the 13th largest contributor to India's health burden "between" 2009-2019.
- **Public health concern** - Road safety has emerged as a critical public health concern requiring immediate attention.
- **Key risk factors** - One of the ways to reduce road traffic injuries is to focus on key risk factors, such as speeding, not wearing helmet and seat belt, and drink driving.
- **Economic impact** - According to a World Bank report, 75% of lower-income households and 57% of higher-income households reported income decline following a crash.
- **Measures taken** - The United Nations Decade of Action for Road Safety 2021-2030 aims to halve road deaths globally by 2030.
- India has aligned with this framework through various state-level initiatives.
- **Karnataka** - Alone accounted for 8.6% of India's road fatalities in 2022, with crash incidents increasing by 9%, fatal crashes by 7%, and grievous injuries by 18% in 2023 compared to the previous year.
- **Karnataka's Multi-Pronged Approach** - Karnataka has implemented a comprehensive strategy combining mass media campaigns with enhanced enforcement:
 - **December 2023** - Campaign addressing speeding through crash survivor stories, reaching an estimated 2.3 crore adult.
 - **January 2024** - Campaign focused on correct helmet usage.
 - **December 2024-January 2025** - Instructional campaign explaining crash science and speed impacts.
- The Karnataka model demonstrates effective policy integration between public awareness and enforcement. Police conducted targeted enforcement drives while

disseminating key messages at checkpoints and through social media.

- This approach echoes successful international models like Bogotá, Colombia, where similar strategies reduced speeding.
- **Measures needed** - Sustainable road safety improvement requires shifting cultural perceptions from viewing crashes as "unavoidable accidents" to "unacceptable tragedies."
- *Communication campaigns along with sound legislation and law enforcement* have the most influence.
- Studies suggest that even a *single, well-designed, evidence-based road safety campaign* can reduce crashes by 0.5%.

Reference

[The Hindu | Road Safety Crises](#)

Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi (PM-DAKSH) Yojana

Why in News?

Union Minister of State for Social Justice and Empowerment has recently inaugurated the Skill Training Programme under PM-DAKSH Yojana, for Persons with Disabilities (Divyangjan) in Shillong.

- **About** - A **central sector scheme** which was launched in 2020-21.
- **Objective** - To enhance competency level of the different target groups to make them employable both in self-employment and wage-employment for their socio-economic development.
- **Target groups:**
 - Scheduled Castes (SCs), Other Backward Classes (OBCs), De-notified Tribes (DNTs), Economically Weaker Sections (EWSs), Safai Mitras including Waste Pickers etc.
- **Ministry** - Ministry of Social Justice and Empowerment.
- **National Skill Qualification Framework (NSQF)** - Training is aligned with the NSQF and post-training support is provided for employment or self-employment opportunities.
- **Category of Skilling Programmes**
- **Up-skilling/Re-skilling** - Focused on enhancing existing skills.
- **Short Term Training Programs** - Designed for immediate employment opportunities.
- **Long Term Training Programs** - Aimed at providing in-depth skill development.
- **Entrepreneurship Development Programs** - Encouraging self-employment ventures.
- **Key benefits** - Training free of cost for the trainees, 100% grants by Government.
- *Stipend will be given to trainees* during the period of training.
- Trained candidates will be provided *certification* after successful completion of training and assessment.
- Trained candidates will be provided placement after assessment and certification.
- **Recent developments** - PM-DAKSH Scheme has benefited 1,87,305 individuals in

2023-2024.

- An independent *third-party evaluation* is planned to assess the “on-ground impact” before re-appraisal for the next Finance Commission cycle.
- Skilled Training Programme for Persons with Disabilities (Divyangjan) in Shillong was recently launched under PM-DAKSH Yojana.
- The programme was organised at Composite Regional Centre for Skill Development, Rehabilitation and Empowerment of Persons with Disabilities, Shillong.

Reference

1. [The Sentinel | PM DAKSH](#)
2. [My Scheme | PM DAKSH](#)

World Air Quality Report (WAQR), 2024

Why in News?

According to the recently released World Air Quality Report, 2024 13 out of world's 20 most polluted cities are in India.

- **WAQR** - It is an *annual report*, which evaluates the global state of air quality from the previous year.
- It is a *comprehensive report presents PM2.5 air quality data* collected from 8,954 cities *across 138 countries*, regions and territories.

*The **PM2.5 data** is measured in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and the data is visualized as a function of the World Health Organization (WHO) annual PM2.5 air quality guideline.*

***PM2.5** comes from **sources** such as the combustion of fossil fuels, and can cause respiratory problems, chronic kidney disease, cancer, and stroke or heart attacks.*

- **Released by** - IQAir, a Swiss Air Quality technology company.
- **5 $\mu\text{g}/\text{m}^3$** - Is the recommended *average annual limit of PM2.5* by the World Health Organization's (WHO).

Key Findings of the Report, 2024

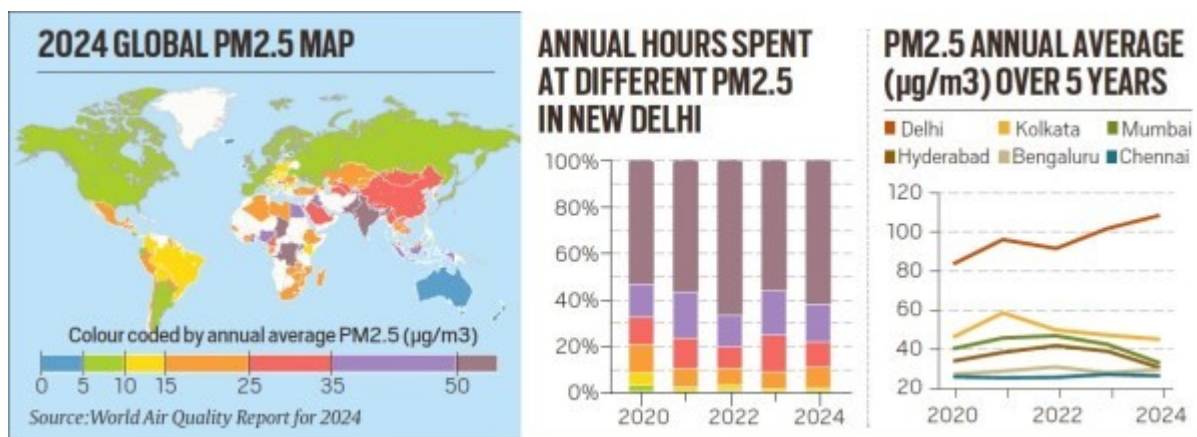
- **Global status** - *Only 17% of global cities* meet WHO air pollution guideline.
- *Only 12 countries*, regions and territories recorded PM2.5 concentrations below the WHO's recommended average annual limit of 5 $\mu\text{g}/\text{m}^3$.
- **Oceania** - It is the ***world's cleanest region***, with 57% of regional cities meeting the WHO guideline.

Based on WHO Annual PM2.5 Guideline

7 Countries met Average Guideline	5 Most Polluted Countries	Countries & Regions Exceeded Guideline
Australia Bahamas Barbados Estonia Grenada Iceland New Zealand	Chad Bangladesh Pakistan Democratic Republic of Congo India	126 (91.3%)
The annual average PM2.5 concentrations of the % most polluted countries is 91.8 µg/m3, 78 µg/m3, 73.7 µg/m3, 58.2 µg/m3, and 50.6 µg/m3 respectively.		

Key Findings of the Report, 2024 in India

- **India** - ***Byrnihat*** (128.2 µg/m3) in meghalaya, ***most polluted city in the world***.
- **Delhi** - It continued to see high levels of pollution (91.6 µg/m3), which almost unchanged from 92.7 µg/m3 in 2023.
- **Top 5 polluted cities** - Rourkela, Nagpur, Nasik, Asansol and Gurugram.
- **Top 5 cleanest cities** - Varanasi, Prayagraj, Coimbatore, Bengaluru and Chennai.



References

1. [The Indian Express| World Air Quality Report, 2024](#)
2. [IQAir| World Air Quality Report Summary](#)

National Archives of India (NAI)

NAI celebrates its 135th Foundation Day with the inauguration of the exhibition "Indian Heritage through Architecture"

- **Aim** - To make historical documents accessible to a wider audience.
- **Showcasing** - India's architectural legacy, covering ancient, medieval, Mughal, and colonial-era structures.
- **Displayed** - Official government files, personal papers of eminent personalities, UNESCO documents, and archaeological excavation records.
- **Launch of Gyan Bharatam Mission** - A visionary initiative to save and promote the heritage of the country's manuscripts.
- Announced in the Union Budget 2025-26.

Geography

Vadhavan Port on PPP Model

Recently, Union Cabinet has approved the setting up of Major Port at Vadhavan, near Dahanu, in Maharashtra on PPP mode.

- **PPP Framework** - Concessions for port terminals are granted via global bidding, with revenue-sharing agreements and assets revert to port authorities after tenure completion.
- **Major Ports** - India has 12 Major Ports governed by the Major Port Authorities Act, 2021,
- **Vadhavan Port Project** - Approved in June 2024, the Rs 76,220 crore project in Maharashtra will be developed under PPP model.

Polity & Governance

Prime Minister Dhan Dhaanya Krishi Yojna

Recently, government has launched a programme to improve farmer's livelihood.

- **Objective** - To help 1.7 crore farmers through enhanced agriculture productivity, improved irrigation facilities and facilitating long-term and short-term credit.
- **Implementation** - By converging other schemes and cover 100 aspirational districts with low productivity, moderate crop intensity and below average credit parameters.
- **Benefits** - Provides quality seeds, fertilizers, and chemicals to boost crop production.

Rural Prosperity and Resilience Programme

Recently, government has launched a comprehensive multi-sectoral rural programme.

- **Purpose** - Launched in partnership with states to address under-employment in agriculture.
- **Key focus areas** - Skilling, investment, and technology to invigorate rural economy.
- Modernizing agriculture with improved productivity and warehousing.
- **Target beneficiaries** - Rural women, young farmers, marginal & small farmers and landless families.
- **Implementation strategy** - Adoption of global and domestic best practices, technical & financial assistance from multilateral development banks.
 - **Phase-1** - Cover 100 developing agri-districts.

PLI scheme for Specialty Steel

Recently, government has launched the second round of PLI scheme for Specialty Steel.

- **Objective** - To strengthening domestic production, fostering innovation, and reducing imports.
- **Specialty steel** - It is a value-added steel wherein normal finished steel is worked upon by way of coating, plating and heat treatment.
- **Applications** - Used in defence, space, power, automobile, specialized capital goods etc.
- **Duration** - 2025-26 to 2029-30.

Agriculture

Soil Fertility Mapping

- **Soil Fertility Maps** - It provides detailed spatial information about the nutrient composition, health and delineating natural bodies of soils
- **Mapped by** - Soil & Land Use Survey of India (SLUSI) under Department of Agriculture & Farmers' Welfare.
- District/village-wise digital soil fertility mapping is done through **geo-spatial techniques** using Soil Health Card (SHC) data.
- **Geospatial techniques:**
 - Remote sensing
 - AI based tools.
- **Application** - It helps farmers in application of fertilizers and reducing the risk of overuse or underuse of fertilizers.

AAHAR-2025

Recently, Union Minister of Food Processing Industry inaugurated the AAHAR-2025 event.

- **AAHAR-2025** - Advancing Food Safety and Innovation
- **Organized by** - Ministry of Food Processing Industries and NIFTEM-Kundli.
- **Objective** - To focus on innovations in food processing, machinery, packaging, safety, and regulatory frameworks, bringing together experts from various sectors.
- **Vision** - At least one Made-in-India food product on every global dining table.
- **Key Outcomes:**
 - Importance of aligning regulatory standards with global best practices
 - Integrating advanced technologies like Blockchain and AI for food safety
 - Fostering collaborations to enhance India's food processing sector.

Science

Preprints

Preprints were gaining popularity due to its open-access.

- **About** - A preprint is a scientific paper shared publicly before undergoing peer review in a journal.
- **Advantages** - It allows rapid dissemination of research, especially in urgent cases like COVID-19 or Pandemic Like situation, though quality varies.
- **Impact** - It promotes open-access science but also raises concerns about the reliability of non-peer-reviewed studies.

Polygraph

- **Polygraph** - It is also called a lie-detector test, is generally used during interrogation by police.
- **Working Mechanism** - Uses a pneumograph tube, blood pressure cuff, and electrodes to detect deviations linked to deception.
- **Significance** - Records physiological responses like blood pressure, pulse, respiration and skin conductivity during interrogations.
- **Reliability** - Scientifically unreliable and inadmissible in court.

Miscellaneous

75/25 Initiative

Recently, government unveiled the 75/25 initiative on World Hypertension Day on May 17, 2023.

- **Aim** - To provide standardized care to 75 million people with Hypertension and Diabetes by December 2025.
- **Address Non-Communicable Diseases (NCDs)** - Such as hypertension, diabetes, oral cancer, breast cancer and cervical cancer.
- **Screening Drive** - A nationwide NCD screening campaign is launched to achieve 100% screening for individuals aged 30+ from Feb 20 to Mar 31, 2025.



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