



HEALTH AND NUTRITION



WHERE ARE WE?

Strengths

- Strong healthcare infrastructure
- High institutional delivery rate at 96.5% and improving maternal health indicators
- Significant reduction in childhood stunting, wasting, and underweight prevalence
- Digital health systems like e-Sanjeevani and Ayushman Bharat Health Account (ABHA) are in active use
- Focus on preventive healthcare through wellness centres, yoga, and millet promotion
- Effective schemes like CHIRAYU, Ayushman Bharat, and Anaemia Mukta Haryana

Areas of Improvement

- Persistently high anaemia levels among women and children
- Concerning burden of Non-Communicable Diseases (NCDs), obesity, and hypertension across all demographics
- Multi-tasking of health workers
- Gender disparities in access, outcomes, and health-seeking behaviours
- Rural-urban gap in digital health access and service penetration
- Need for strategy shift due to rising urbanisation and migration

Opportunities

- Expansion of AI, digital tools, and real-time health monitoring systems
- Leveraging traditional foods and agroecological practices for better nutrition
- Community-based preventive care through Health and Wellness Centres (HWCs) and school health programmes
- Global partnerships and best practices adaptable to the state context
- Policy alignment with SDGs, NHM, and national nutrition missions

Threats

- Climate-linked health risks and rising pollution-related diseases
- Antimicrobial resistance and new infectious disease threats
- Technology-led exclusion of rural, elderly, and digitally unskilled populations
- Misinformation and low health literacy fueling distrust and poor compliance
- Inadequate emergency preparedness for pandemics and climate shocks

WHERE DO WE WANT TO GO?

VISION



By 2047, Haryana will build a pioneering health and nutrition ecosystem under the Future-Ensured Families framework, ensuring a healthier, empowered society free from disease, malnutrition, and disparity.

MISSION



Transform healthcare in Haryana through the Future-Ensured Families approach, anchored in **the Healthy, Hopeful, and Happy (HHH)** pillars, to ensure universal health coverage, gender equity, preventive wellness, and resilient health systems for all incorporating regional diversity, with special attention to border districts, vulnerable castes, and seasonal migrant populations.

GOALS

- Life Expectancy (Male) > 75 years
- Life Expectancy (Female) > 80 years
- MMR < 10 per lakh live births
- IMR < 5 per 1,000 live births
- Children under 5 years who are stunted < 5%
- 100% Full immunisation coverage (9-11 months)
- Healthcare worker density: 84 per 10,000 population

ASPIRATIONAL FUTURE

A future where Haryana becomes a national model for equitable and preventive healthcare by implementing inclusive, technology-enabled systems and empowering every citizen with access to quality services. The state emerges as a leader in AI-driven health innovation and nutrition security, ensuring resilient families and eliminating malnutrition, disease burden, and gender-based health disparities.

HOW WILL WE REACH THERE?

Nutritional Challenges: Strengthen monitoring systems, fortify food programmes, and promote precision nutrition through digital tools and community-based interventions.

Rising NCDs: Expand screening, launch lifestyle campaigns, and integrate AI-driven prevention and early diagnosis into public health systems.

Digital Transformation in Healthcare: Establish interoperable digital platforms, expand rural telemedicine, and train health workers in AI and remote care delivery.

Gender Disparities in Healthcare: Mainstream gender budgeting, improve access for women and girls, and institutionalise inclusive infrastructure and support services.

Healthcare Access Transformation: Scale up preventive services, decentralise governance, and embed wellness promotion into education, urban planning, and food systems.

Resilient Health Systems: Build pandemic-ready infrastructure, implement early-warning systems, and strengthen intersectoral coordination for emergency response.

3 BIG ACTIONS

01 Social Security 360° Plan

02 Health Rise 2047

03 Family Guard 2047

INTRODUCTION

Haryana has achieved significant progress in healthcare, demonstrating substantial improvements in key indicators such as maternal health services, institutional deliveries, and reduced childhood stunting and wasting. The state has established a robust health infrastructure with an extensive network of hospitals, PHCs, and HWCs have expanded healthcare access and addressed specific health challenges. The healthcare system is transitioning from treatment-centric to prevention-focused approaches, with expanded digital healthcare services and programmes promoting traditional foods and physical wellness through yoga and meditation. However, persistent challenges remain, including high prevalence of anaemia among women (60.4%), increasing obesity rates in adults, and rising NCDs.¹ The state continues to navigate a triple burden of addressing malnutrition, tackling NCDs, and reducing gender disparities in healthcare access, particularly in rural and underserved areas.

WHERE ARE WE?

Haryana's healthcare sector is undergoing a gradual transition, marked by demographic shifts, digital advancements, and an increasing emphasis on preventive healthcare. Despite notable progress, the health landscape remains a blend of achievements and persisting challenges in three critical areas:

Current Status

Malnutrition and Anaemia: Prevalence of anaemia in women (15-49 years) marginally decreased from 62.7% (NFHS-4) to 60.4% (NFHS-5). Childhood stunting decreased from 34.0% (2015-16) to 27.5% (2020-21), wasting decreased from 21.2% to 11.5%, and underweight children decreased from 29.4% to 21.5%.²

NCDs: As high as 67.3% of deaths are premature in the State, with ischemic heart diseases, Chronic Obstructive Pulmonary Disease (COPD), and Diabetes Mellitus Type 2 contributing the majority of Disability-Adjusted Life Years (DALYs) in the State (NCDs contribute to 60.99% of DALYs).³ Hypertension affects 26.2% of urban and 24.6% of rural men.⁴ Obesity increased significantly: from 21.0% to 33.1% for women and from 20.0% to 28.3% for men between 2015-16 and 2020-21.⁵

Health Infrastructure (2025)^{6,7}

- 22 District Civil Hospitals, 50 Sub-Divisional Hospitals, 122 CHCs
- 408 PHCs, 107 Urban PHCs, 2,734 Sub Health Centres
- 2,722 HWCs
- 148 Services (ICDS) Projects (127 rural + 21 urban)
- 25,962 Anganwadi Centres (including 512 Mini AWCs)
- From just two Government/Government-aided and three private medical colleges in 2011, Haryana now has six Government, one Government-aided, and eight Private Medical Colleges in 2025
- Haryana has three main Employees' State Insurance Corporation (ESIC) Hospitals (Faridabad, Manesar, Gurugram), plus multiple Employees' State Insurance (ESI) dispensaries and several empanelled private hospitals providing services to ESIC beneficiaries.
- Two new Government Medical Colleges (Bhiwani & Mahendragarh) will be added in 2025, with seven more planned in Jind, Sirsa, Yamunanagar, Kaithal, Fatehabad, Palwal, and Charkhi Dadri, plus a Super Speciality Health University at Kutail, Karnal

- AllMS Jhajjar (with National Cancer Institute) is functional, and another AllMS is under construction at Rewari
- Six new nursing colleges will be added in 2025; nursing colleges are also planned at five upcoming Government Medical Colleges, along with paramedical colleges at five locations and a Government Dental College at Nuh

Life Expectancy and Mortality (2021-22)

- Life Expectancy: Males - 69.37 years; Females - 74.09 years⁸
- IMR: Urban - 28.6 per 1,000 live births; Rural - 35.3 per 1,000 live births
- Under-5 Mortality Rate: Urban - 36.0 per 1,000 live births; Rural - 39.8 per 1,000 live births⁹

Maternal and Child Health

- MMR: 89 per 1,00,000 live births (Special Bulletin on Maternal Mortality in India 2020-22)
- Institutional Births: 94.9% (2020-21)¹⁰
- Childhood Stunting: 27.5%, Child Wasting: 11.5%, Child Underweight: 21.5% (2020-21)¹¹

Disease Burden

- Communicable Diseases burden: 26.88% (2019)¹²
- NCDs now make up nearly 59% of Haryana's total disease burden, with ischaemic heart disease and COPD leading causes of death and disability.¹³
- Tuberculosis (TB) case notification rate: 260.8 per 1,00,000 population¹⁴
- Obesity prevalence: Women - 33.1%, Men - 28.3% (2020-21)¹⁵
- Hypertension prevalence: 26.2% (urban), 24.6% (rural) (2020-21)¹⁶

Healthcare Access and Financing

Out-of-Pocket Health Expenditure (OOPE) in Haryana:

- OOPE as a share of total health expenditure dropped from 45.5% (2019-20) to 37.5% (2021-22), reflecting effective government interventions like Ayushman Bharat- Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), upgraded Ayushman Arogya Mandirs (AAMs), free drugs & diagnostics, and wider access to affordable generics through Pradhan Mantri Bharatiya Janaushadhi Pariyojana (PMBJP)¹⁷
- The state has fully implemented AB-PMJAY and expanded health coverage to all families earning up to INR three lakh per year through its own Comprehensive Health Insurance of Antyodaya Units (CHIRAU) and CHIRAU Extension schemes
- The state provides free dialysis services to all residents under the PPP model, along with free CT/MRI and Cath Lab services at District Hospitals and Medical Colleges
- Per Capita Money Spent on Public Health: INR 3,237 (2021-22)¹⁸

Mental Health Statistics

Common Mental Disorders

- A comprehensive study¹⁹ in rural Haryana found that 20% of adults screened positive for Common Mental Disorders. The prevalence was significantly higher among:
 - Those aged 60 years or older (12.33 times higher risk)
 - Widowed, divorced, or separated individuals (7.50 times higher risk)
 - Illiterate individuals (6.25 times higher risk)
 - Those with monthly family income below Rs 10,000 (3.33 times higher risk)

Depression in Adolescents

A study²⁰ in rural Haryana revealed that 20.6% of adolescents (aged 10-19 years) screened positive for depression.

The prevalence was:

- Higher in girls (22.3%) compared to boys (19.2%)
- 11.7% in late adolescence and 8.9% in early adolescence

Mental Health Workforce in Haryana

Clinical Psychologists

Haryana has 87 clinical psychologists (as of July 2023) registered with the Rehabilitation Council of India²¹

Faridabad District Case Study²²

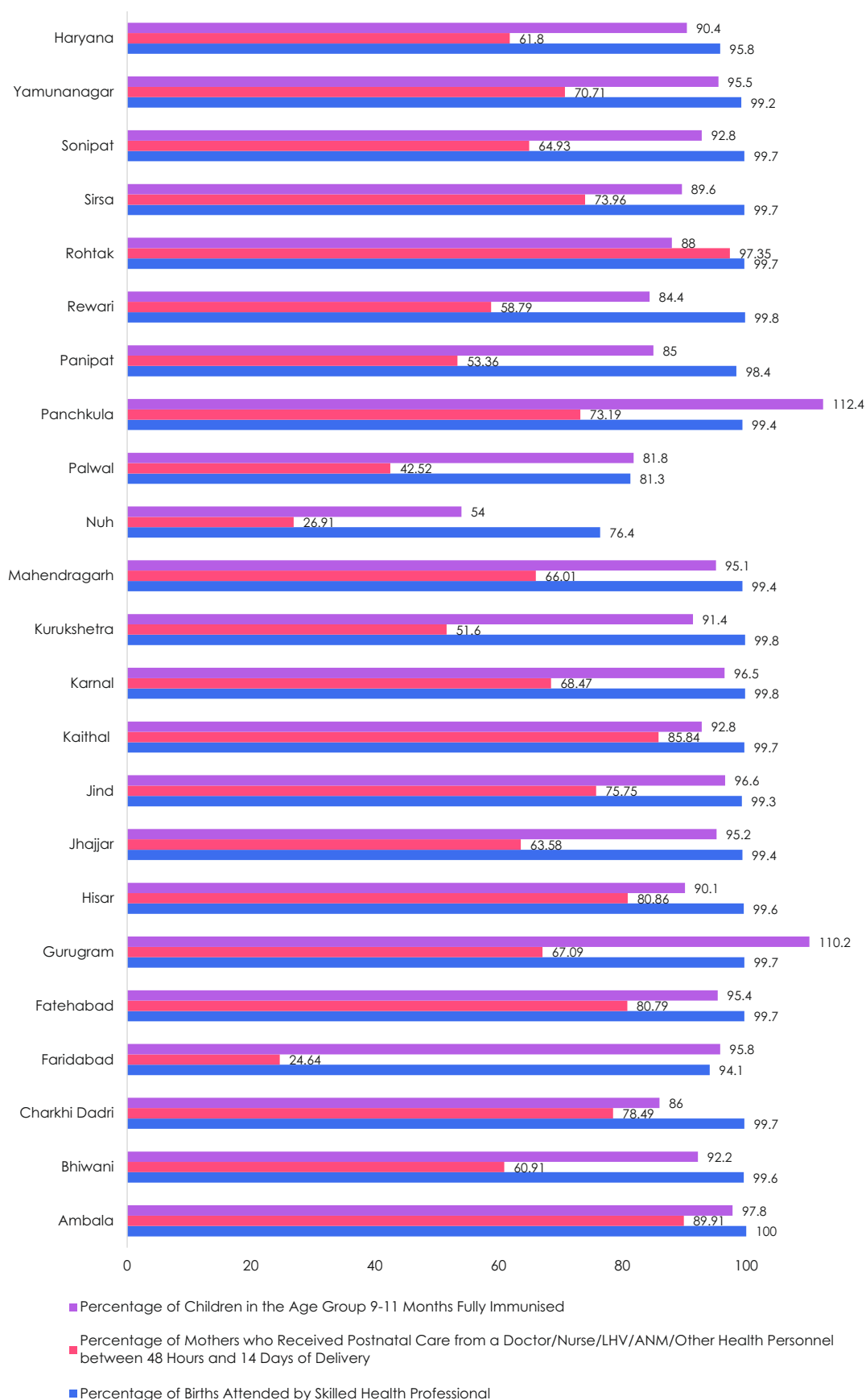
A detailed mapping study of Faridabad district revealed:

- 16 psychiatrists in total serving the district
- 14 psychiatrists in private practice
- 2 psychiatrists in public health facilities
- Most psychiatrists concentrated in urban areas

Implementation of District Mental Health Programme (DMHP) in Haryana²³

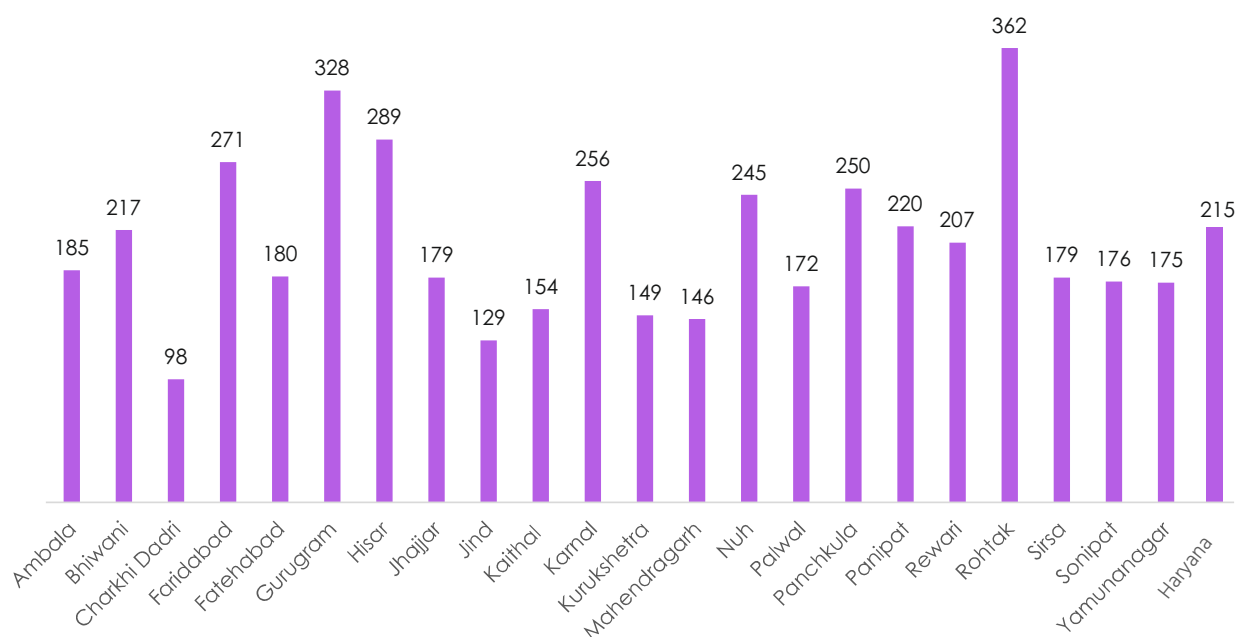
Haryana has implemented the DMHP in all 22 districts of the state as part of the National Mental Health Programme. The DMHP operates under the NHM and provides comprehensive mental health services.

Maternal and Child Health Indicators: Skilled Birth Attendance, Postnatal Care, and Child Immunisation Rates



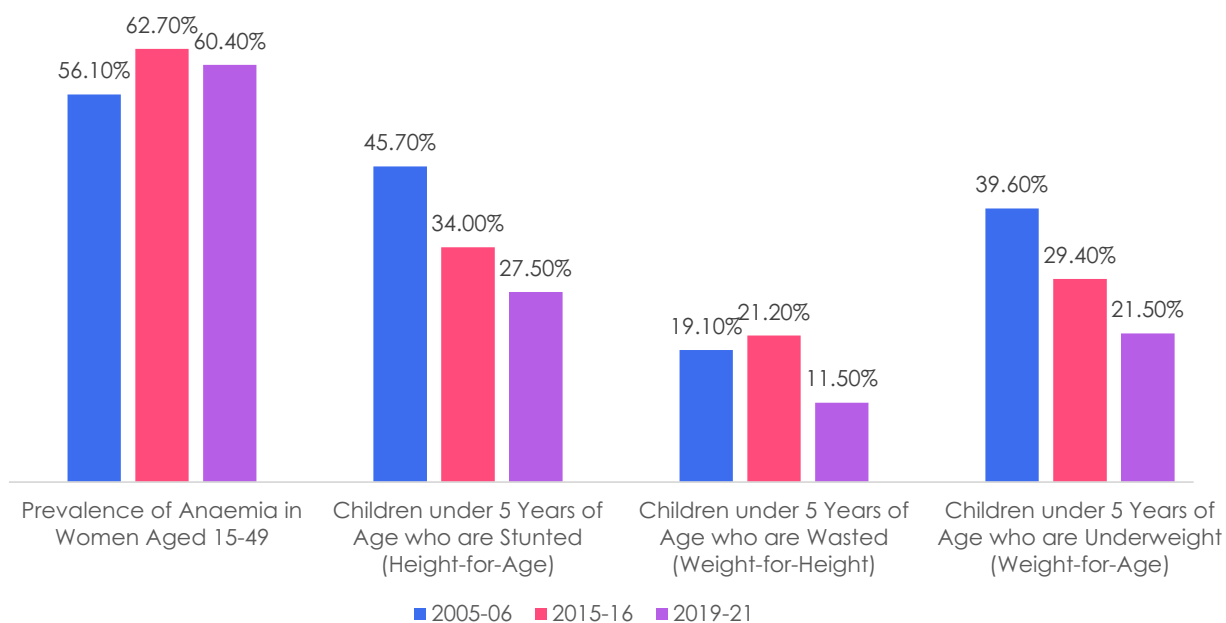
Graph 16: Maternal and Child Health Indicators: Skilled Birth Attendance, Postnatal Care, and Child Immunisation Rates
(Source: Haryana SDG District Index 2022 Consultative Document)

Tuberculosis Incidence per 1,00,000 Population



Graph 17: Tuberculosis Incidence per 1,00,000 Population
(Source: Haryana SDG District Index 2022 Consultative Document)

Nutritional Status Indicators: Anaemia and Malnutrition among Women and Children



Graph 18: Nutritional Status Indicators: Anaemia and Malnutrition among Women and Children
(Source: NFHS Reports for the years 2005-06, 2015-16 and 2019-21)

FUTURES TRIANGLE

(*Refer to page number 28 for an in-depth overview of the Futures Triangle.)

Pushes of the Present

Positive

HWCs (2,722) in Haryana are strengthening preventive, promotive, and curative care while integrating Panchkarma AYUSH centres for holistic health services²⁴

Food Security Act amendments & technological advancements improving nutritional outcomes

Strengthened healthcare access through AYUSHMAN BHARAT, CHIRAYU, with transparent beneficiary selection

Commitment to controlling **NCDs** through inclusion in the NHM

Digital healthcare tools, including CoWIN, UWIN, eVIN, eUpchaar, eSanjeevani, and ABHA platforms

Budget allocation of 6.3% (of total expenditure) for healthcare in 2024-25²⁵

HWCs in Haryana being integrated with **Panchkarma AYUSH centres** to provide holistic healthcare, combining modern medicine with traditional Ayurvedic therapies to enhance preventive, promotive, and curative healthcare, offering services like yoga, naturopathy, and Panchkarma treatments alongside primary healthcare implementation of **Poshan Abhiyan** to combat malnutrition

State One Health Coordination Cell should be created to ensure collaboration between veterinary services, public health agencies, and environmental departments

Negative

Lifestyle-related habits are gradually contributing to a rise in NCDs like diabetes and hypertension

Growing mental health challenges, particularly rising stress, anxiety, and depression among urban youth and peri-urban populations

Rising pollution levels are adding to respiratory health issues and may be impacting overall well-being

Malnutrition and anaemia among women and children remain a concern, partly due to challenges in regular monitoring and follow-up.

Gender bias affecting access to adequate nutrition

Positive

SANKALP Authority Established: Haryana has constituted the SANKALP Authority (Substance Abuse & Narcotics Knowledge, Awareness & Liberation Programme Authority) as the central state body responsible for coordinating all government and societal efforts to eliminate both drug demand and supply, and guide the state's youth toward responsible development.

Pulls of the Future

Positive

Shift towards preventive healthcare through regulatory measures and health-promoting programmes

Integration of Poshan tracker and Reproductive and Child Health (RCH) portal for enhanced monitoring. Promotion of **sustainable agriculture and traditional foods** like millets

Routine surveillance systems for early detection of disease outbreaks

AI applications in healthcare improving early detection of malnutrition and disease, and mental health challenges (e.g., depression, suicide risk)

Use of **AI-based TB detection** piloted in Gurugram district hospitals

Negative

Resource scarcity challenges impacting health system strengthening efforts

Unregulated pesticide use increasing cancer and health risks

Water pollution with chemicals and heavy metals posing significant health hazards

Insufficient public health awareness fostering misinformation and panic

Climate change and changes in disease patterns

Rapid/unplanned urbanisation, and resource crunch in peri-urban areas

Rising prevalence of NCDs affecting productivity and national development

Weights of the Past

Positive

Success of targeted vaccination campaigns in eradicating diseases like smallpox and polio, and COVID vaccination drive

Negative

Conservative social mindset hindering efforts to address patriarchal norms

Positive

Focused approach and **digitalisation of procurement** of Medicines and Medical Equipment, improving governmental efficiency

Government schemes promoting gender equality, like **BBBP**

Legal age of marriage increased to 18 promoting girls' physical and mental well-being

Negative

Skewed sex ratio (910 females per 1,000 males in December 2024)²⁶

Cultural preference for male children contributes to skewed health resource allocation within families

Low female literacy rates (65.94%) exacerbating health disparities²⁷

Disproportionate focus on maternal and child health at the cost of focusing on NCDs

High prevalence of **childhood undernutrition** straining family resources

Longstanding social stigma around mental health issues and lack of institutional services historically

WHERE DO WE WANT TO GO?

VISION 2047

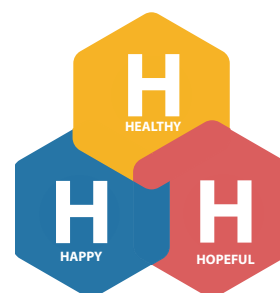
By 2047, Haryana will lead the nation in building a pioneering health and nutrition ecosystem that is equitable, innovative, and preventive. Harnessing the power of advanced technologies and inclusive strategies, the state will focus on Future-Ensured Families who can thrive in a healthier, empowered society, free from the burdens of malnutrition, disease, and disparity.

- **End malnutrition and anaemia:** Leverage precision nutrition programmes and real-time monitoring systems to ensure no child or adult is left behind.
- **Revolutionise NCD care:** Lead the way in predictive healthcare through early diagnosis, transformative interventions, and sustainable lifestyle shifts.
- **Digitise healthcare delivery:** Achieve seamless integration of advanced digital solutions for universal access to high-quality care.
- **Champion gender equity in healthcare:** Dismantle barriers with inclusive policies, ensuring equitable access for every individual.

- **Preventive healthcare at the core:** Embed wellness and prevention into every facet of healthcare policy and practice.
- **Strengthen health resilience:** Develop adaptive systems ready to combat pandemics, climate challenges, and emerging health crises.

STRATEGIC MISSION* : Future-Ensured Families – The HHH Approach

Haryana's vision for 2047 must be anchored in family well-being through a holistic framework. The HHH Approach—Healthy, Hopeful, and Happy—provides an integrated strategy to strengthen healthcare access, enhance financial security, and develop robust social infrastructure for all families across the state.



1. HEALTHY: Universal Healthcare for a Stronger Haryana

Building on the foundation of Ayushman Bharat, Haryana will expand universal health coverage through strategic purchasing (aligning funding and incentives with provider performance) to ensure comprehensive, cashless care for all families. This expansion will focus on targeted maternal and child health interventions, such as allowing birth companions during delivery, to provide emotional support and improve outcomes, aiming to reduce maternal and infant mortality rates. Haryana will strengthen its immunisation efforts by adopting focused strategies to reach underserved and hard-to-reach areas, with the goal of achieving 100% vaccination coverage across the state.

The state will strengthen preventive healthcare through community-based screening, scaling up of “e-Upchaar” for teleconsultations in rural belts, early intervention, and health promotion activities that address both communicable and non-communicable diseases at their roots.

2. HOPEFUL: Social Security for a Resilient Society

Haryana will develop a comprehensive social security framework that provides enhanced financial protection through the Dayalu scheme, offering life and accidental insurance coverage for vulnerable populations, including daily wage earners, farmers, and informal workers. The state will implement a streamlined social pension delivery system by adopting citizen-friendly best practices to ensure timely and efficient support for elderly citizens at their doorstep. Furthermore, Haryana will create inclusive public infrastructure with accessibility modifications for differently-abled individuals based on successful models of accessible transportation and built environments, ensuring that all citizens can participate fully in social and economic life.

3. HAPPY: Investing in Care Economy and Women's Empowerment

Recognising the strong link between family well-being and economic growth, Haryana will set up state-supported childcare centres in urban and industrial areas to support working parents and encourage greater participation of women in the workforce. The state will develop an elder care support system that combines institutional and home-based care options for ageing populations, acknowledging the changing demographic profile and family structures. Additionally, Haryana will create formal recognition and support mechanisms for care work, acknowledging its significant contribution to economic development while addressing the disproportionate burden often placed on women. Women Wellness Centres are being integrated with

*Aligned Departments: Health & Family Welfare, Medical Education & Research, Public Health Engineering, Rural Development, Revenue & Disaster, Development & Panchayats, Rural Development, Urban Local Bodies, Women & Child Development, Social Justice & Empowerment, Welfare of SCs/BCs

ULBs in Gurugram and Karnal, ensuring accessible healthcare and well-being services for women in urban areas. These investments in the care economy will not only improve quality of life but also drive economic growth through increased labour force participation and productivity.

In pursuit of this vision, the state has outlined several goals across economic growth and public safety.

GOALS

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Life Expectancy (years)	Male: 69.37 Female: 74.09	National Commission on Population, Ministry of Health & Family Welfare, 2021-25	Male: 72.0 Female: 77.0	Male: > 73 Female: > 78	Male: > 75.0 Female: > 80.0	India's National Health Policy 2017 targets increasing life expectancy to 70+ years by 2025. Global benchmarks include the WHO's SDGs, which emphasises healthy lives for all. Higher-income countries average 80+ years of life expectancy, providing aspirational targets for 2047.
MMR (per 1,00,000 live births)	89	Special Bulletin on Maternal Mortality in India 2019-21, Office of Registrar General	70	49	< 10	WHO SDG target 3.1 aims for global MMR below 70 by 2030. Countries with strong health systems achieve rates below 10. Finland, Norway, and Japan have achieved rates of 3-5, demonstrating near-elimination of preventable maternal deaths are possible with comprehensive healthcare access.

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
IMR (per 1,000 live births)	28	Sample Registration SYSTEM, Office of the Registrar General, India May, 2022	15	< 11	< 5	India's National Health Policy 2017 targets IMR of 28 by 2019. WHO SDG 3.2 targets under-5 mortality of 25 per 1,000 live births by 2030. Best-performing nations like Japan, Finland, and Singapore have an IMR of 2 or lower, setting the 2047 aspirational target.
Prevalence of anaemia in women (15-49 years) (%)	60.4%	National Family Health Survey-5, 2019-21	30%	25%	15%	WHO Global Nutrition Targets aim to reduce anaemia in women of reproductive age by 50% by 2025. Most developed countries maintain anaemia rates below 15%. Nations with comprehensive nutrition programmes like Sweden and Norway achieve rates below 10%.
Children under 5 years who are stunted (%)	27.5	National Family Health Survey-5, 2019-21	13.5	< 11	< 5	India's POSHAN Abhiyaan aims to reduce stunting to 25% by 2022. SDG target is 40% reduction from 2012 levels by 2025. World's best performing countries like Denmark, Japan, and South Korea have stunting rates below 2.5%.

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Obesity prevalence in adults (%)	Women: 33 Men: 28.3	National Family Health Survey-5, 2019-21	Women: 25.0 Men: 20.0	Women: 17 Men: 14	< 5	WHO Global NCD Action Plan targets halting the rise in obesity by 2025. Best performing countries in obesity management maintain rates of 15-20% through comprehensive prevention and management strategies. Japan achieves rates of 4.3% (men) and 3.7% (women).
Hypertension prevalence in adults (%)	Women: 21.0 Men: 25.1	National Family Health Survey-5, 2019-21	Women: 16.2 Men: 19.9	Women: 12 Men: 16	Women: 5.0 Men: 9.0	WHO's Global NCD Action Plan targets 25% relative reduction in hypertension prevalence by 2025. Countries with strong preventive healthcare like, Canada, achieve rates below 15%. South Korea and Switzerland demonstrate best practices with rates below 10%.

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Full immunisation coverage (9-11 months) (%)	90.4	National Family Health Survey-5, 2019-21	95	97	100	Global Vaccine Action Plan targets 90% national coverage for all vaccines by 2030. Several countries including Singapore, South Korea, and Hungary achieve near 100% coverage, demonstrating the feasibility of universal immunisation.
TB incidence (per 1,00,000 population)	260.8	National TB Elimination Programme India TB Report 2024	130	88	< 10.0	India's National Strategic Plan for TB Elimination aims to achieve TB-free status by 2025. WHO's End TB Strategy targets a 90% reduction in the TB incidence rate by 2035 compared to 2015. Countries like USA, Canada, and Australia maintain rates below 10 per 1,00,000.

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Healthcare worker density (per 10,000 population)	46.8	Public Health Division, Ministry of Health and Family Welfare, 2019	60	68	84	WHO recommends minimum threshold of 44.5 healthcare workers per 10,000 population to achieve Universal Health Coverage (UHC). High-performing health systems in Europe maintain ratios of 80-100 per 10,000. Countries like Norway and Switzerland demonstrate best practices at 100+.
Out-of-pocket health expenditure (% of monthly per capita consumption)	37.5	Department of Health and Family Welfare, Government of Haryana, 2021-22	20	< 16	< 10	WHO considers health expenditure "catastrophic" when it exceeds 10% of household income. SDG 3.8 aims for UHC with financial risk protection. Countries with universal health coverage, like UK, Germany, and Japan maintain OOP below 5% of household spending.

Indicator	Baseline	Baseline Source	Target 2030	Target 2036	Target 2047	Benchmarks
Public health expenditure (% of GDP)	0.77	Performance Audit on Public Health Infrastructure and Management of Health Services, 2022-23	2.5	3	5	India's National Health Policy 2017 targets increasing public health expenditure to 2.5% of GDP by 2025. WHO recommends a minimum 5% of GDP for achieving UHC. OECD countries average 7.6% of GDP on public health spending.

POSSIBLE FUTURE SCENARIOS

BUSINESS AS USUAL FUTURE

- Gradual health improvements through existing programmes
- Incremental progress insufficient to meet evolving healthcare demands
- Limited technological integration in healthcare delivery
- Persistent gaps in rural and underserved areas
- Continuing workforce shortages despite modest investments
- Marginal gains in nutrition indicators and NCD management

POSITIVE DISRUPTIVE FUTURE (OPPORTUNITIES)

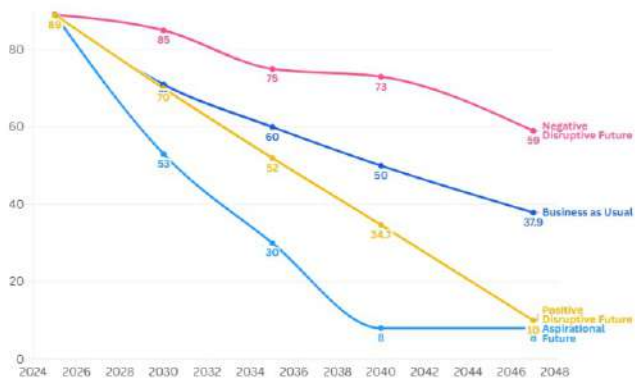
- Transformative digital health ecosystem with AI and telemedicine
- Strategic public-private partnerships driving healthcare innovation
- Democratised access to specialised care through technology
- Data-driven preventive healthcare and early intervention
- Precision medicine approaches tailored to population needs
- Integrated health and nutrition platforms addressing root causes

NEGATIVE DISRUPTIVE FUTURE (RISKS)

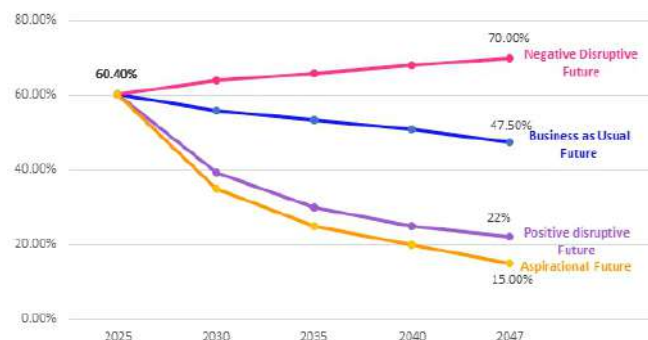
- Intensified health challenges from climate change and antimicrobial resistance
- Deepening healthcare disparities across socioeconomic groups
- Overwhelming burden of NCDs exceeding treatment capacity
- Critical workforce shortages compromising service delivery
- Inadequate infrastructure failing to meet population needs
- Resource constraints limiting essential health services

ASPIRATIONAL FUTURE

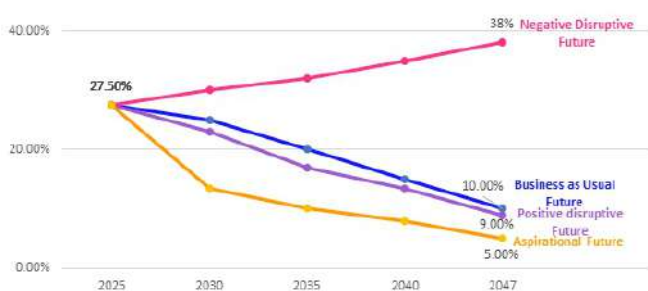
- Universal access to quality healthcare as a fundamental right
- Health equity achieved through targeted interventions
- Comprehensive health literacy and preventive care culture
- Zero preventable maternal and child deaths
- Complete elimination of malnutrition and micronutrient deficiencies
- Robust health system resilience against emerging threats



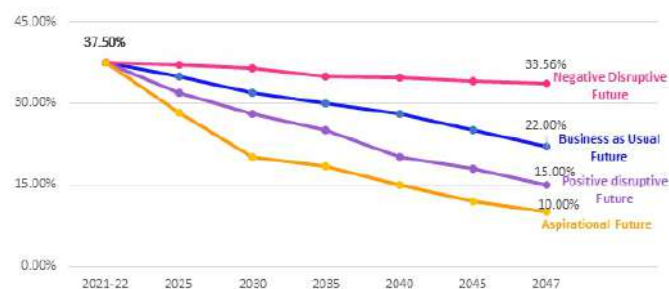
Graph 19 (a): Maternal Mortality Ratio (per 1,00,000 live births)



Graph 19 (b): Prevalence of Anaemia in Women (15-49 years)



Graph 19 (c): Prevalence of Stunting in Children Under 5 Years



Graph 19 (d): Out-of-Pocket Health Expenditure (% of Monthly Per Capita Consumption)

HOW WILL WE REACH THERE?

Translating Haryana's health and nutrition vision into reality demands strategic action guided by evidence-based interventions. The path forward requires addressing systemic barriers through targeted solutions that leverage technological innovation, policy reforms, multisectoral partnerships, and community engagement. By diagnosing root causes of persistent challenges in nutrition deficiencies, NCDs, healthcare access, and gender disparities, we can implement transformative approaches that yield measurable impacts. This section outlines critical issues and their corresponding intervention pathways, establishing a comprehensive roadmap to bridge current gaps and achieve Haryana's ambitious health and nutrition targets by 2047.

Issues

- 🔍 Nutritional Challenges - Malnutrition and Anaemia in Children, Pregnant Women and Adolescents
- 🔍 Rising NCDs - Increasing Cases in the Population
- 🔍 Digital Transformation in Healthcare - Shifting Services from Manual to Digital Platforms
- 🔍 Gender Disparities - Low Sex Ratios, Crime against Women and Children

- 🔍 Healthcare Access Transformation - Transitioning from Treatment-Centric to Prevention-Focused Services
- 🔍 Resilient Health Systems - Strengthening for Pandemic Management, Environmental Hazards and Sudden Disease Outbreaks

ISSUE 1: NUTRITION CHALLENGES

Despite progress in reducing childhood stunting and wasting, Haryana continues to face critical nutrition challenges, particularly persistent anaemia among women and children. While anaemia prevalence has marginally decreased from 62.7% to 60.4% among women aged 15-49 years,²⁸ nine districts have shown concerning increases²⁹. This silent epidemic demands targeted interventions that address nutritional deficiencies while recognising regional variations and vulnerable populations requiring immediate attention.

Current Status³⁰

- ✔ 27.5% of children under 5 years are stunted (2020-21)
- ✔ 15.1% of women have a Body Mass Index (BMI) below normal (2020-21)
- ✔ Occurrence of anaemia across different age groups (2020-21):
 - Children aged 6-59 months:- 70.4%
 - Pregnant women aged 15-49 years:- 56.5%
 - Women aged 15-19 years:- 62.3%
 - Men aged 15-19 years:- 29.9%
- ✔ Under ICDS in Haryana, Pregnant & Lactating Mothers receive nutritional support, ensuring better maternal and child health
- ✔ 20,350 Accredited Social Health Activists (ASHAs) engaged under NHM - for every 1,000 rural and 2,000 urban slum population in the state. ASHA workers actively promote balanced diets rich in iron, folic acid, and essential nutrients, encouraging the intake of leafy vegetables, pulses, and fruits
- ✔ Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) ensures free antenatal check-ups on the 9th of every month, focusing on early detection of high-risk pregnancies in Haryana. Including three mandatory checks—Haemoglobin test, Blood Pressure monitoring, and Urine test—help identify anaemia, hypertension, and gestational diabetes, ensuring safer pregnancies
- ✔ Bakri Balloon technology initiative for managing postpartum haemorrhage (PPH) in Haryana
- ✔ Haryana's Millet push: INR 27 crore allocated in FY 2024-25 and integration into Mid Day Meal (MDM)

Factors Influencing the Issue

- **Policy Implementation:** Effectiveness of nutrition programmes depends on implementation quality, monitoring mechanisms, and coordination across departments
- **Socioeconomic Determinants:** Income levels, education, and purchasing power directly impact access to diverse, nutritious foods

- **Cultural Practices:** Traditional dietary habits, food taboos, and gender-based food distribution within households affect nutritional intake
- **Agricultural Systems:** Food production methods, crop diversity, and sustainability of farming practices influence food security and nutrient availability
- **Infrastructure:** Access to clean water, sanitation facilities, and healthcare services impacts nutritional outcomes and prevents malabsorption issues
- **Climate Variability:** Weather patterns affect agricultural productivity, food prices, and consequently, household food security and diversity

Impacts of the Issue

Direct Impact

- Increase in low birth weight babies affecting child development
- Poor maternal and child health outcomes
- Improved health through fortified food products
- Better nutrition through the availability of natural/organic produce

Indirect Impact

- Healthcare system strain, increased expenditure, and reduced productivity
- Perpetuated poverty cycles and limited social mobility
- Reduced healthcare costs and enhanced community health outcomes
- Improved food security and agricultural sustainability

Global Learnings

Global Best Practices³¹

Mexico's ESIAN Strategy for Combatting Anaemia and Malnutrition: Mexico's ESIAN (Estrategia Integral de Atención a la Nutrición), led by the Ministry of Health with UNICEF and World Bank support, is a nationally scaled strategy targeting malnutrition and anaemia in pregnant women and young children. Originating under the Prospera cash transfer programme, it integrates micronutrient supplementation, fortified foods, and frontline worker training.

Disruptive Technologies - Child Growth Monitor: Revolutionising Nutritional Assessment

A German non-profit has introduced an app utilising Hyperspectral Sensor Imaging (HSI) for precise measurements. This cloud-based tool employs a small 3D infrared sensor to capture a child's height, body volume, weight ratio, and head and upper arm circumference to the millimetre. The app then scans and analyses this data using AI, accurately assessing the child's nutritional status. By categorising children as malnourished or healthy, this innovative solution aids in early intervention and targeted nutritional support, potentially transforming child health outcomes globally.³²

Possible Pathways

Short-Term Pathway (2030)

Strengthen Nutrition Monitoring Systems

- Integrate Poshan Tracker with RCH Portal for real-time data and link funding to nutrition outcomes (e.g. allocate resources/incentives based on reductions in stunting/anaemia)
- Train all frontline health workers in digital data entry and usage

Institutionalise Nutrition Education

- Make nutrition education mandatory in school curricula
- Develop interactive modules and train teachers for effective delivery

Ensure Anaemia-Free India

- Achieve 100% iron-folic acid coverage under the AMB Scheme
- Counselling by ASHAs for adolescent girls, pregnant/lactating women, and children (6-14 years) on iron-rich diets including leafy vegetables, pulses, and fruits
- Compliance tracking by ASHA and Multi Purpose Health Worker (MPHW) (F)
- Strengthening platforms like Village Health & Nutrition Day (VHND)/Urban Health & Nutrition Day (UHND), Village Health, Sanitation & Nutrition Committees (VHSNCs), and Mahila Arogya Samiti (MAS) by engaging PRIs and ULBs
- Promote Behaviour Change Communication (BCC) on healthy diets, hygiene, and sanitation
- Rolling out of “Garbh Sanskar” (Ayurveda-based antenatal care) at government hospitals and AAMs
- Promote immunity boosters like Swarna Prashan through AYUSH outreach in schools and Anganwadis
- Fix supply chain gaps and enforce mandatory school screenings

Enable Digital Self-Screening

- Launch a mobile app for anaemia and malnutrition self-assessment

Long-Term Pathway (2047)

Institutionalise Preventive Family Healthcare

- Mandate annual health check-ups for all families
- Promote proactive health management through awareness drives

Build State-Level Nutrition Planning Capacity

- Conduct annual workshops for health officials, nutritionists, and policymakers
- Develop State Nutrition Budgets aligned with national health targets
- Monitor implementation and revise plans based on health indicators

Boost Investment in Nutrition Innovation

- Increase funding for nutrition-focused research and tech adoption
- Foster public-private partnerships to scale impactful models
- Support pilots and rapid deployment of successful interventions
- Funds allocated for diets may be utilised by providing pre-cooked/semi-cooked protein-rich foods by involving farmers’ cooperatives like Vita/Hafed, etc.
- Develop Herbal Gardens in schools, PHCs, and Gram Panchayat land to foster community nutrition awareness

Advance Nutrition through Legislative Action

- Enforce policies promoting agroecological farming practices
- Mandate food waste reduction measures across sectors
- Establish a legal framework ensuring equitable access to nutritious food for all
- The MDM, maternal and child diets should target protein deficiency
- Introduce policies that incentivise local production of nutritious and traditional foods, supporting farmer livelihoods and rural economies.

Short-Term Pathway (2030)

- Integrate referral linkages to the nearest health services

Fortify Nutritional Support Programmes

- Enrich MDMs and ICDS rations with iron, folic acid, and micronutrients
- Fast-track the Food Fortification programme and introduce local cuisine in MDM
- Collaborate with local women's SHGs and parent associations to develop and implement community-based nutrition initiatives, empowering women in food preparation and dietary choices

Expand Diagnostic Access

- Equip PHCs, schools, and Anganwadis with portable haemoglobin metres
- Ensure annual anaemia testing for all children and pregnant women

ISSUE 2: RISING NON-COMMUNICABLE DISEASES

Haryana faces an alarming rise in NCDs, with conditions like ischemic heart disease, COPD, and Diabetes Mellitus Type 2 being major contributors of DALYs.³³ NCDs contribute to 60.99% of DALYs. Hypertension affects 26.2% of urban and 24.6% of rural men³⁴, while obesity rates have surged significantly—from 21.0% to 33.1% for women and from 20.0% to 28.3% for men between 2015-16 and 2020-21³⁵. This epidemiological transition demands urgent action through preventive, promotive, and curative approaches to mitigate the growing NCD burden.

Current Status

- ✔ NCDs now make up nearly 59% of Haryana's total disease burden, with ischaemic heart disease and COPD leading causes of death and disability.³⁶
- ✔ 11.9% of women and 13.5% of men have high blood sugar levels (2020-21)³⁷
- ✔ 21% of women and 25.1% of men have elevated blood pressure (2020-21)³⁸
- ✔ Obesity increased from 21.0% to 33.1% for women and 20.0% to 28.3% for men (2015-16 to 2020-21)³⁹
- ✔ 2.5% of women and 29.1% of men use tobacco products; 0.3% of women and 16.1% of men consume alcohol⁴⁰
- ✔ NIROGI Haryana: Launched in November 2022 to offer biannual comprehensive health checkups to the Antyodaya population. Disease diagnoses include: Anaemia (2.84 lakh), Hypertension (1.19 lakh), Diabetes (93,719), Cardiac (6,231), TB (3,450), Carcinoma (1,138)⁴¹
- ✔ Emerging concerns of stress, anxiety, and depression are increasingly being reported alongside NCDs, especially among working-age adults in urban and peri-urban areas, with limited mental health services at the primary care level.

Factors Influencing the Issue

- **Lifestyle Changes:** Sedentary behaviours, reduced physical activity, and increasing screen time contribute significantly to metabolic disorders
- **Dietary Transition:** Shift toward processed foods high in salt, sugar, and unhealthy fats, replacing traditional nutritionally balanced diets
- **Tobacco and Alcohol Use:** 29.1% of men use tobacco products and 16.1% consume alcohol, increasing NCD risk substantially⁴²
- **Environmental Factors:** Air pollution, water contamination, and exposure to chemicals amplify NCD susceptibility
- **Healthcare System Capacity:** Limited NCD screening, early detection, and management services at the primary care level
- **Public Awareness:** Insufficient knowledge about NCD prevention and risk reduction strategies among general population
- **Economic Impact:** A two-way relationship between NCDs and poverty, where each exacerbates the other
- **Psychosocial Factors:** Urban stress, social isolation, and work-life imbalance contribute to rising mental health conditions like depression and anxiety, which have a bidirectional relationship with NCDs like hypertension and diabetes.

Impacts of the Issue

Direct Impact

- Increased burden of chronic diseases requiring ongoing management
- Greater awareness of healthy foods and physical activities
- Expanded alternative medicine options for NCD control

Indirect Impact

- Higher healthcare demand, rising DALYs, and premature mortality
- Improved quality of life, enhanced immunity, and better mental well-being
- More personalised treatment and optimised healthcare utilisation

Global Learnings

Global Best Practice: Chile's Front-of-Package Labelling & Marketing Restrictions:⁴³

Chile's phased food labelling law mandates black stop-sign warnings on packaged foods high in sugar, salt, fats, or calories, empowering informed consumer choices. Coupled with bans on marketing to children and unhealthy school foods, it targets lifestyle-related NCDs. Since 2016, the policy has driven industry reformulation and healthier consumer behaviour.

Disruptive Technologies - Leveraging Predictive Analytics for Disease Management⁴⁴

A growing number of individuals are undergoing annual health scans that generate over 200 gigabytes of personal biological data. This shift towards a new model of healthcare, where diseases are detected at their earliest molecular signals through image-scanning the body in full to identify cardiovascular issues, early-stage cancers, metabolic changes and neurodegenerative signs. This is what full-diagnostic uploads are now capable of doing. Advanced platforms can analyse



the body's microbiome in unprecedented ways and can make recommendations on which foods support the person's body's optimal functions and which undermine it, your nutrition by data, not trends. This principle is being applied to dermatological care—the newest biological tools can identify ageing cells and remove them before they cause inflammation, skin damage or internal decline. These models are making healthcare personal, predictive and proactive, helping individuals lead longer, healthier lives, not through medication but by anticipating and pre-empting health challenges.

Possible Pathways

Short-Term Pathway (2030)

Regulate Unhealthy Food Consumption

- Limit salt and saturated fats in packaged foods
- Require clear front-of-pack labels
- Penalise non-compliant companies
- Enforce the FSSAI Act (2006) against adulterated food/drinks

Digitise Preventive Healthcare

- Link lifestyle apps with health portals
- Send tips, reminders, and alerts via SMS

Expand NCD Services in Communities

- Set up NCD units at health centres
- Early screening of high-risk groups via AAMs
- Follow-up of cases by ASHA and MPH (F)
- Provide screenings, counselling, and early care
- Screen People Living with HIV (PLHIV) for cervical cancer with follow-ups
- Integrate mental health services at all AAMs and PHCs
- Train ASHAs, MPHs, and school counsellors to identify early signs of mental distress
- Set up district-level mental health helplines

Run Behaviour Change Campaigns (BCCs)

- Promote fitness, nutrition, and addiction-free living
- Use schools, workplaces, and social media
- Promote yoga, naturopathy, and community wellness
- Awareness of organic food consumption through BCCs
- Promote mental health awareness, reduce stigma, and encourage early help-seeking
- Include mental well-being and stress management in BCCs, recognising their bidirectional relationship with NCDs

Promote Health-Friendly Urban Planning

- Mandate paths, cycling lanes, and green spaces
- Encourage active, safe public spaces
- Ensure safe, hygienic, and secure housing conditions, particularly in low-income and peri-urban areas

Short-Term Pathway (2030)

- Ensure public spaces are safe and accessible for all age groups and abilities, encouraging physical activity and social interaction. This includes planning for easily accessible elder care and childcare facilities to support working families and address demographic shifts.

Create NCD Centres of Excellence

- Build units for heart, diabetes, and lifestyle care, with provider payment reform (e.g. bundled or performance-based payments tied to patient outcomes)
- Train doctors and drive research

Boost Preventive Wellness Access

- Open more yoga and wellness centres
- Promote healthy habits at the community level
- Organise regular sports events and fitness drives at community, school, and Resident Welfare Association (RWA) levels to foster physical activity, teamwork, and mental well-being

Long-Term Pathway (2047)

Create a Dedicated NCD Prevention Fund

- Set up a long-term fund within the state budget
- Ensure annual allocation for screening, treatment, and awareness
- Link disbursement to performance metrics
- Progressively implement incentive and outcome-linked compensation models for public sector doctors and healthcare teams, using the existing flexi-fund mechanisms under PM-JAY (Ayushman Bharat)
- Adopt a strategic purchasing approach, aligning PM-JAY reimbursements with a structured performance framework
- Explore mechanisms to provide financial assistance for NCD management to vulnerable families through existing social security schemes

Strengthen Digital Health Infrastructure

- Implement centralised electronic health records in all public facilities
- Enable real-time data access for doctors and telemedicine
- Automate tracking of patient outcomes

Establish State-Level Research Hubs

- Build research consortia with medical experts and policymakers
- Design tailored interventions and therapies for high-risk groups
- Pilot precision nutrition and lifestyle programmes

Expand Health Education & Outreach

- Add NCD modules to school curricula
- Launch regular health screenings at workplaces
- Conduct monthly community health camps and public campaigns

Use AI for Early Detection & Communication

- Deploy AI tools in PHCs and Anganwadis for real-time anaemia and malnutrition screening
- Launch AI chatbots and apps for personalised health messaging

ISSUE 3: DIGITAL TRANSFORMATION IN HEALTHCARE

Haryana's healthcare sector is experiencing a digital revolution, exemplified by initiatives like eSanjeevaniOPD, which provided 367,276 teleconsultations by April 2024, and the Swasth Haryana mobile app for OPD registrations⁴⁵. Despite these advancements, significant digital divides persist—only 46.21 per 100 rural residents are digital subscribers compared to 105.65 in urban areas⁴⁶. Bridging this gap is essential to ensure equitable access to transformative healthcare technologies and realise their full potential.

Current Status

- ✔ "eSanjeevaniOPD" initiated in Haryana since May 2020, with 3,67,276 consultations by April 2024⁴⁷
- ✔ "Swasth Haryana" mobile app launched in 2021 for OPD registration in 55 public health facilities⁴⁸
- ✔ AI technology implemented for TB treatment in government-run health facilities
- ✔ **Significant digital divide:** 46.21 per 100 rural population are digital subscribers versus 105.65 in urban areas⁴⁹
- ✔ Haryana's "Swasth Haryana App" linked to the PPP database ensures targeting based on family vulnerability scores
- ✔ "Project Charaka" introduced Tele-health Kiosks in Jhajjar district offering free vital testing, virtual consultation and advanced diagnosis

Factors Influencing the Issue

- **Technological Infrastructure:** Availability of reliable internet connectivity, hardware, and digital platforms determines adoption rates
- **Digital Literacy:** Skills and comfort with technology among both providers and patients impact utilisation effectiveness
- **Rural-Urban Healthcare Divide:** Uneven distribution of health cadre professionals and infrastructure demand for digital solutions in rural areas
- **Policy Framework:** Regulatory environment for telehealth, data privacy, and digital health standards shapes implementation
- **Healthcare Workforce Readiness:** Training and adaptability of health professionals to integrate digital tools into care delivery
- **Interoperability:** Capacity for seamless data exchange between different health information systems and platforms
- **Resource Allocation:** Investments in digital health infrastructure, maintenance, and upgrades across geographic areas
- **Public Trust:** Confidence in digital health systems regarding privacy, security, and quality of virtual care services

Impacts of the Issue

Direct Impact

- Provision of real-time data for tracking disease trends and managing outbreaks

Indirect Impact

- Optimised resource allocation and improved patient satisfaction

Direct Impact

- Enhanced efficiency and transparency through reduced human error
- Better disease surveillance and outbreak prediction
- AI-enabled diagnostic and treatment solutions

Indirect Impact

- Earlier intervention and improved containment of health threats
- Improved accuracy, enhanced patient safety, and reduced medical errors

Global Learnings

Global Best Practice: Estonia's Nationwide e-Health Transformation:⁵⁰

Estonia's e-Health ecosystem, anchored by the Estonian Health Information System (EHIS) and X-Road data exchange, enables secure, real-time access to electronic health records nationwide. Patients and providers benefit from seamless digital services like e-prescriptions, which cover 99% of all prescriptions, along with telemedicine and AI-powered analytics. This citizen-centric infrastructure has positioned Estonia as a global leader in efficient, accessible digital healthcare.

Disruptive Technologies - Advancing Radiology Operations Through Virtual Collaboration

The continued adoption of radiology operations command centres exemplifies a transformative shift in healthcare. This cloud-based hub-and-spoke model facilitates virtual over-the-shoulder support, connecting expert imaging technologists with their counterparts at remote sites in real-time, even as patients undergo scans. Similarly, real-time virtual collaboration in ultrasound extends specialist care, enabling physicians to communicate remotely with their teams and patients across various settings, including hospitals, clinics, or remote satellite offices. By leveraging virtual collaboration, healthcare systems can democratise expertise, ensuring a consistent standard of care regardless of geographical location.⁵¹

Possible Pathways

Short-Term Pathway (2030)

Ecosystem of Digital Convergence

- Strengthen the ecosystem of digital convergence (PPP + e-Sanjeevani + RCH + Poshan Tracker)
- Ensure every citizen has an Ayushman Bharat Health Account ID (ABHA ID), within the Ayushman Bharat Digital Mission (ABDM), linked to the National Health Registry

Long-Term Pathway (2047)

Standardise Healthcare Data Interoperability

- Mandate uniform data formats, APIs, and secure sharing protocols across systems

Fund Digital Health Expansion

- Allocate budget for telehealth, AI diagnostics, and Electronic Health Record (EHR) adoption
- Offer tax incentives for private sector investments

Short-Term Pathway (2030)

- Expand AYUSH teleconsultation services through e-Sanjeevani and ABHA platforms

Standardise Telemedicine & AI Integration

- Set clear telemedicine regulations and privacy norms
- Integrate AI tools for remote diagnosis and decision support

Fund Rural Telemedicine Hubs

- Explore private sector investment, and launch pilot hubs in underserved areas equipped with digital tools and trained staff, with reimbursements based on service utilisation and quality (e.g., teleconsultation follow-ups), ensuring equitable access for all families

Train Healthcare Workers in Digital Tools

- Run mandatory digital literacy programmes
- Offer hands-on training in telemedicine, AI, and remote monitoring

Implement Statewide Electronic Health Records

- Establish interoperable EHRs across all health facilities
- Enable seamless data sharing between public and private providers

Improve Connectivity in Health Facilities

- Expand broadband and 5G in PHCs and clinics
- Prioritise rural and underserved locations

Strengthening Geriatric Care Infrastructure

- Prioritise the development of specialised Geriatric Health Units at district hospitals and primary health centres

Long-Term Pathway (2047)

Integrate Digital Health in Education

- Add courses on AI, telemedicine ethics, and health informatics to medical and nursing curricula
- Ensure a future-ready, digitally skilled healthcare workforce
- Develop digital literacy programmes not only for healthcare workers but also for elderly citizens and rural populations to ensure they can fully access and benefit from digital health services, fostering social inclusion and supporting their participation in the care economy where applicable.

Leverage AI for Predictive Healthcare

- Implement ML models for early detection and personalised treatment plans
- Use AI for risk stratification in healthcare facilities
- Develop AI-powered tools that can identify families at risk of digital exclusion and proactively offer support and training, ensuring no family is left behind in the digital transformation.

Build a Robust Digital Health Infrastructure

- Invest in cloud-based health data systems and 5G telemedicine platforms
- Prioritise cybersecurity for secure data exchange and remote services

Elderly Health Insurance and Preventive Care

- Comprehensive Elderly Health Insurance and Wellness Scheme should be designed to focus on preventive screenings, early detection of age-related illnesses, and affordable rehabilitation programmes.

ISSUE 4: GENDER DISPARITIES IN HEALTHCARE AND NUTRITION

Gender inequities in Haryana's healthcare system are evident through critical indicators—maternal mortality ratio stands at 89 per 100,000 live births⁵², sex ratio at birth remains low at 910 females per 1,000 males,⁵³ and anaemia prevalence is significantly higher among females (60.4%) compared to males (29.9%)⁵⁴. These disparities stem from deeply rooted social norms and structural barriers that limit women's healthcare access, decision-making power, and nutritional status, requiring comprehensive gender-responsive interventions.

Current Status

- ✔ MMR stands at 89 per 100,000 live births (2020-22)⁵⁵
- ✔ Sex ratio at birth is 910 females per 1,000 males (December 2024)⁵⁶
- ✔ Female literacy rate (65.94%) significantly impacts health awareness and outcomes⁵⁷
- ✔ Higher anaemia rates among females (60.4%) compared to males (29.9%)⁵⁸
- ✔ 12.5% of women (surveyed at age 20-24) were married before age 18⁵⁹
- ✔ “Nari Shakti Clinics” initiative being piloted in ULBs to offer women-specific screenings and counselling

Factors Influencing the Issue

- **Social Determinants:** Gender norms, educational attainment, and economic empowerment affect women's health-seeking behaviours
- **Decision-Making Autonomy:** Limited control over household resources and personal healthcare decisions restricts access to services
- **Health System Responsiveness:** Availability of female healthcare providers, gender-sensitive facilities, and women-focused services
- **Nutritional Practices:** Intra-household food distribution patterns often prioritise male members over females
- **Reproductive Health Awareness:** Knowledge about maternal health, family planning, and nutritional needs during pregnancy
- **Mobility Constraints:** Physical access limitations and transportation barriers affecting women's ability to reach healthcare facilities
- **Legislative Protections:** Implementation of policies that safeguard women's health rights and ensure gender-equitable services

Impacts of the Issue

Direct Impact	Indirect Impact
<ul style="list-style-type: none"> • Improved acceptance of girl children in families • Higher maternal morbidity and mortality • Limited access to nutrition and healthcare for women and girls • Restricted decision-making power in health-related choices 	<ul style="list-style-type: none"> • Greater gender equality and expanded opportunities for women • Reduced economic productivity and increased healthcare burden • Intergenerational effects on child health and development • Delayed care-seeking behaviour and poorer health outcomes

Global Learnings

Global Best Practice: Nepal's "Suaahara II" Multi-Sector Nutrition Programme.⁶⁰

Nepal's "Suaahara II" Multi-Sector Nutrition Programme:

Nepal's "Suaahara II" is a multi-sectoral nutrition programme addressing gender disparities in maternal and child health through a life-cycle approach. It targets women and girls with integrated health, WASH, and agriculture services while promoting gender-equitable decision-making in food and healthcare. Community campaigns challenge harmful norms like preferential feeding of boys and deprioritising girls' nutrition.

Disruptive Technologies - Tackling Postpartum Haemorrhage: Innovations in Blood Loss Measurement

Postpartum haemorrhage remains a significant global health challenge, with approximately 70,000 women worldwide succumbing to this condition annually, making it a leading cause of maternal mortality. Defined as bleeding exceeding 500 millilitres within 24 hours of childbirth, it affects an estimated 14 million women each year, yet nearly half of the cases go undetected. A groundbreaking study conducted in 80 hospitals across four African countries introduced a simple yet effective solution: the use of a "drape" device to collect and measure postpartum blood loss accurately. This innovation, coupled with a bundle of treatment options endorsed by the WHO, resulted in a remarkable 60% reduction in the incidence of severe bleeding among women post-delivery. Furthermore, the study observed a corresponding decrease in maternal deaths attributed to haemorrhage.⁶¹

Possible Pathways

Short-Term Pathway (2030)

Integrate Gender-Sensitive Education

- Embed gender equity themes in school syllabi
- Train teachers through gender-focused modules
- Include gender awareness in community outreach, and set gender-sensitive performance targets (e.g. maternal health coverage) in provider contracts to improve accountability for women's health.

Strengthen Gender Budgeting Mechanisms

- Conduct regular capacity-building workshops

Long-Term Pathway (2047)

Invest in Impact Evaluation

- Fund long-term studies to assess gender interventions
- Use data to guide policy updates and targeted spending

Strengthen Institutional Capacity

- Train government, CSOs, and community institutions
- Allocate resources and technical support for implementation

Short-Term Pathway (2030)

- Implement monitoring frameworks for expenditures
- Mandate gender audits across departments

Reform Protection Laws

- Streamline legal processes for faster justice
- Establish fast-track courts for gender-based violence
- Use gender-neutral language in policies
- Provide legal aid and counselling services for women and girls facing health-related discrimination or violence, ensuring their safety and access to justice

Track Gender-Focused Fund Utilisation

- Establish real-time expenditure tracking systems
- Conduct annual performance audits

Expand Survivor Support Services

- Strengthen 24/7 crisis hotlines
- Ensure the availability of functional shelters
- Integrate legal aid clinics at one-stop centres for women and children in urban designs

Use Technology for Real-Time Reporting

- Launch mobile applications for violence reporting
- Deploy AI dashboards to monitor service access

Improve Public Safety Infrastructure

- Install CCTV in public spaces
- Expand street lighting in vulnerable areas
- Set up emergency call boxes at high-risk locations

Enforce Gender-Sensitive Urban Planning

- Mandate zoning for safe public toilets
- Provide dedicated childcare centres
- Ensure safe spaces

Long-Term Pathway (2047)

Enforce Comprehensive Legal Frameworks

- Address gender gaps, domestic violence, trafficking, and child protection
- Ensure strict law enforcement and access to justice

Develop Gender-Responsive Infrastructure

- Build safe housing and accessible transport
- Improve public safety and sanitation for vulnerable groups
- Formally recognise and support care work through policy and economic incentives, addressing the disproportionate burden on women and valuing their significant contribution to economic development.

Adopt Intersectional Approaches

- Consider ethnicity, disability, gender identity, and class
- Create inclusive policies for LGBTQIA+, minorities, and the disabled

Extend Beti Bachao, Beti Padhao

- Haryana's BBBP campaign can be extended into health domains via incentive-based schemes

ISSUE 5: HEALTHCARE ACCESS TRANSFORMATION - PREVENTION-FOCUSED APPROACHES

Haryana is gradually shifting from curative to preventive healthcare approaches, evidenced by the establishment of 2,722 HWCs⁶². This transformation is further supported by the allocation of INR 27 crore for millet promotion and the establishment of the Nutri-Cereals Research Station in Bhiwani⁶³. Accelerating this paradigm shift is essential to reduce disease burden, optimise healthcare resources, and improve population health outcomes.

Current Status

- ✔ All Urban PHCs upgraded to AAM, providing 12 comprehensive services⁶⁴
- ✔ 2,722 functional HWCs established across Haryana⁶⁵
- ✔ Regular yoga sessions conducted at all UPHCs
- ✔ 1,000 yoga schools (Yogashalas) opened across the state and linked to HWCs via preventive wellness drives every Sunday
- ✔ INR 27 crore allocated for the promotion of millets in the FY 2024 budget
- ✔ Kaithal's millet-based pilot showed a 20% decline in anaemia over six months
- ✔ Nutri-Cereals Research Station established at Gokalpura in Bhiwani district
- ✔ **Medical Education Expansion:** Significant rise in medical college seats to improve doctor-population ratio, with similar efforts underway for nursing and paramedical training
- ✔ Haryana has introduced financial incentives to encourage farmers to move beyond the wheat-paddy cycle, promoting the production of alternative food crops that offer affordability in the market
- ✔ **Upgraded District Hospitals:** All district hospitals have been upgraded to 200 beds, with enhanced facilities to support preventive care efforts
- ✔ **AYUSH Integration:** Over 1,000 AYUSH Medical Officers have been appointed and posted to both AYUSH and Health Department facilities
- ✔ **Public-Private Partnerships (PPP):** Free dialysis, CT/MRI scans, and interventional cardiology services like cardiac cath labs are being provided under PPP models across districts
- ✔ **Strengthening Preventive and Cancer Care:** Focus on preventive services in urban/peri-urban areas, cancer care centres in all districts, and population-level screenings through HWCs
- ✔ Tailored interventions being piloted under Aspirational Districts Programme

Factors Influencing the Issue

- **Health System Orientation:** Realignment of incentives, resources, and priorities toward preventive services
- **Workforce Development:** Training healthcare providers in preventive approaches and health promotion strategies
- **Community Engagement:** Public participation in wellness initiatives and preventive health behaviours
- **Financing Mechanisms:** Budget allocations that prioritise and sustain preventive health programmes
- **Traditional Knowledge Integration:** Incorporation of indigenous health practices like Ayurveda and yoga with modern medicine

- **Built Environment:** Urban planning and infrastructure that promote physical activity and healthy living
- **Food Systems:** Agricultural policies and nutrition interventions supporting healthy dietary patterns

Impacts of the Issue

Direct Impact

- Reduced disease incidence and improved quality of life
- Potential workforce challenges during transition without adequate resources
- Shift from curative to preventive paradigm

Indirect Impact

- Lower healthcare facility strain and improved access for underserved populations
- Possible decline in service quality and patient satisfaction
- Long-term cost savings and improved population health outcomes

Global Learnings

Global Best Practice: Denmark's Integrated Prevention-First Health Model:⁶⁶

Denmark's healthcare model exemplifies a shift from treatment to prevention through community-based "health houses" delivering localised primary care. Programmes like Tingbjerg Changing Diabetes promote healthy lifestyles via community-driven interventions. The system integrates technology, including EHRs and AI tools, to boost preventive care and patient participation, reducing dependence on hospitals.

Disruptive Technologies - Harnessing Big Data and Analytics for Disease Prevention

The ongoing technological revolution has led to the accumulation of vast amounts of healthcare data in recent years, presenting unprecedented opportunities for advancing disease prevention efforts. These massive datasets, often anonymised, hold the potential to unveil intricate medical patterns and trends in healthcare information technology. By analysing this wealth of data, scientists can uncover novel correlations between various factors such as demographics, ecology, economy, and population health conditions.⁶⁷

Possible Pathways

Short-Term Pathway (2030)

Launch Public Health Campaigns

- Use mass media, outreach, and digital tools
- Promote healthy lifestyles and early screenings

Decentralise Health Governance

- Empower PRIs, ULBs, and HWCs with financial and administrative control

Long-Term Pathway (2047)

Mandate Prevention-Focused Metrics in Quality Standards

- Include prevention indicators in healthcare assessments
- Link regulatory standards and accreditation to preventive outcomes

Short-Term Pathway (2030)

Develop Preventive Healthcare Financing Models

- Develop preventive financing models based on population health needs and evidence; formalise purchasing of preventive/traditional services through outcome-based contracts (e.g. funding validated Ayurveda/nutrition programmes tied to health impact)
- Engage policymakers, insurers, and the private sector

Expand Preventive Services through Partnerships

- Collaborate with employers, schools, and faith-based organisations
- Embed health programmes in everyday settings

Address Workforce Gaps in Public Health

- Launch recruitment and training initiatives
- Offer incentives for preventive care professionals
- Ensure deployment of qualified AYUSH doctors in all AAMs, which will be made available alongside modern medicine

Develop Personalised Mobile Health Apps

- Help users track behaviours and set health goals
- Enable reminders for screenings and check-ups

Strengthen Community Outreach and Health Centres

- Improve resources and staff training
- Expand mobile services for remote and underserved areas

Long-Term Pathway (2047)

Launch Fellowships in Preventive Medicine and Public Health

- Offer state-sponsored fellowships and certifications
- Build a skilled workforce for community health initiatives

Integration of AYUSH into AAMs/PHC/CHC

- Establishment of AYUSH wing in all PHCs/CHCs and District Hospitals
- Establish AYUSH Lifestyle Clinics at the district level for prevention and management of NCDs like diabetes and hypertension
- Establish state AYUSH Research and Training Institute to validate and promote Haryana's traditional and health knowledge

Ensure Continuous Professional Development

- Make ongoing training mandatory for healthcare providers
- Focus on preventive care, digital tools, and emerging risks

Create a National Health Data Ecosystem

- Enable secure, real-time data sharing on prevention outcomes
- Facilitate collaboration among researchers, clinicians, and policymakers

Advance Precision Medicine through Data Integration

- Use genetic and lifestyle data in routine screenings
- Deliver personalised preventive care and early interventions

ISSUE 6: RESILIENT HEALTH SYSTEMS FOR PANDEMIC MANAGEMENT

Haryana's experience with COVID-19 highlighted the imperative for resilient health systems capable of responding to emergencies while maintaining essential services. With 14,230 hospital beds⁶⁸, 148 ICDS projects⁶⁹, and 76.9% vaccination coverage among children aged 12-23 months⁷⁰, the state has foundational infrastructure but requires strategic enhancement to withstand future health threats, environmental hazards, and disease outbreaks without compromising routine healthcare delivery.

Current Status

- ✔ Hospital Infrastructure: 14,230 beds in government hospitals (2022)⁷¹
- ✔ 148 ICDS projects and 25,962 AWCs providing community-based services⁷²
- ✔ 76.9% of children aged 12-23 months fully vaccinated⁷³
- ✔ **National Viral Hepatitis Control Program (NVHCP):** Launched in 2018 to eliminate Hepatitis C by 2030; provides free screening and treatment for Hep B & C; Haryana awarded for best performance in 2022; key centres include PGIMS Rohtak and 26 treatment sites; in FY 2024–25, over 18 lakh screened, thousands treated, and nearly Six lakh pregnant women tested⁷⁴
- ✔ Limited emergency response capacity and integrated surveillance systems
- ✔ Challenges in coordination between the health, environment, and disaster management sectors
- ✔ Haryana is integrating health response into the State Disaster Management Authority SOPs

Factors Influencing the Issue

- **Surveillance Capacity:** Robust early warning systems and real-time data monitoring for threat detection
- **Emergency Response Protocols:** Clear governance structures and predefined roles during health emergencies
- **Supply Chain Resilience:** Secure access to essential medicines, vaccines, and equipment during crises
- **Healthcare Workforce Surge Capacity:** Ability to rapidly mobilise and deploy trained personnel
- **Intersectoral Coordination:** Functional mechanisms for collaboration across health, environment, and disaster management
- **Community Preparedness:** Public awareness and engagement in emergency response
- **Climate Adaptation:** Health system readiness for managing climate-sensitive diseases and extreme weather events

Impacts of the Issue

Direct Impact

- Reduced morbidity and mortality through rapid response systems
- Better mitigation of environmental health hazards
- Improved pandemic preparedness and management

Indirect Impact

- Enhanced government capacity to combat health emergencies
- Lower incidence of environmentally-related illnesses and improved community resilience
- Stronger public confidence in healthcare institutions and reduced economic disruption

Global Learnings

Global Best Practice: Norway's National Pandemic Preparedness Strategy:⁷⁵

Norway's 2023 National Pandemic Preparedness Strategy places resilience at the core of its health system, emphasising whole-of-government coordination and local readiness. It integrates climate-sensitive risk mapping, mandatory stockpiles, and data-sharing protocols. A standout feature is its "learning systems" approach, using past outbreak insights to inform future responses. The strategy links pandemic readiness with primary care and mental health, reflecting a shift from reactive to institutional preparedness.

Disruptive Technologies - Advancing Virus Detection: The Potential of DNA Motors

The development of a tiny DNA motor capable of detecting viruses represents a significant advancement in responding swiftly to emerging threats. The pioneering work has centred around creating a fully automated electronic sensor for real-time surveillance and tracing of airborne viruses. This breakthrough technology holds the promise of playing a pivotal role in the ongoing battle against infectious diseases. The envisioned product, resembling a smoke detector but designed to detect pathogens, could be deployed in key locations such as airports, schools, and crowded areas. Upon detection, individuals present in the vicinity could receive prompt notifications of potential exposure to the pathogen. Crucially, the system would generate real-time maps pinpointing areas where new airborne viruses are emerging and being detected, providing a vital window of opportunity for swift intervention to prevent further spread. This innovative approach, encapsulated in the Pandemic Early Alert System (FIP2023), offers hope for a more proactive and effective response to emerging health crises.⁷⁶

Possible Pathways

Short-Term Pathway (2030)

Develop Standardised Emergency Response Protocols

- Define clear roles for national and local agencies
- Ensure rapid, coordinated action during crises

Formalise Multi-Stakeholder Partnerships

- Sign MOUs with communities, NGOs, and global partners

Long-Term Pathway (2047)

Establish Interdepartmental Governance Committees

- Form national and state-level bodies
- Integrate health, environment, and disaster sectors
- Coordinate emergency response and resilience planning

Short-Term Pathway (2030)

- Create joint plans for disaster preparedness and relief

Train Healthcare Workers for Crisis Response

- Conduct mandatory training and prepare medical professionals for emergencies similar to peak pandemic
- Focus on infection control and emergency medical care
- Provide telemedicine training to all MPHWS (M/F), enabling them to coordinate with specialists at designated hubs for enhanced patient care

Use Real-Time Data for Outbreak Detection

- Set up data systems in hospitals and monitoring units
- Enable early detection and quick response to outbreaks

Expand Healthcare Surge Capacity

- Establish emergency units and stockpile key supplies
- Train rapid response teams for crisis deployment

Ensure Inclusive Emergency Healthcare Access

- Prioritise services for marginalised and vulnerable groups
- Guarantee access to care and vital information

Strengthen Biomedical Waste Management

- Enforce strict segregation and disposal protocols
- Minimise biohazard risks in healthcare settings

Long-Term Pathway (2047)

Develop Cross-Sectoral Partnerships

- Connect health agencies with urban planners and environmental experts
- Address air and water quality, housing, and food security
- Strengthen community health resilience

Launch National Workforce Training Programmes

- Provide certifications in disaster preparedness and epidemiology
- Train professionals on climate-related health risks
- Build a skilled crisis response workforce

Implement AI-Driven Predictive Systems

- Forecast outbreaks, pollution risks, and extreme weather impacts
- Support early intervention and resource allocation

Upgrade Health Infrastructure for Climate Resilience

- Use solar backup systems and flood-resistant structures
- Adopt sustainable water management practices
- Ensure uninterrupted services during crises

Embed Equity-Focused Funding Mechanisms

- Prioritise underserved and vulnerable communities
- Expand access to primary healthcare in high-risk areas
- Prioritise underserved and vulnerable communities, expanding access to primary healthcare in high-risk areas, and ensuring that emergency response plans include provisions for accessible childcare and elder care services during dislocations, supporting family resilience and well-being

BIG ACTIONS

1. Social Security 360° Plan

An all-encompassing safety net that unifies pensions for seniors, targeted worker insurance, easy-access disability benefits, and a robust childcare-eldercare system—delivered through a single digital platform. By investing in integrated family-support centres across districts, the government empowers women to pursue careers while ensuring every household has the protection and care it needs to thrive.

2. Health Rise 2047

Haryana envisions universal healthcare that provides free preventive and specialised services to all, supported by tech-driven medical facilities and mobile clinics, dramatically reducing maternal and child mortality statewide. It will leverage the PPP database for real-time risk targeting using the Family Guard dashboard.

3. Family Guard 2047

A next-generation governance tool that harnesses real-time data and AI-powered risk analysis to proactively identify and support at-risk families before crises escalate. This advanced monitoring and assistance network ensures no family in Haryana slips through the cracks, firmly cementing social equity in the era of rapid change. The state will link AI-powered dashboards to Anganwadi-level data inputs for early family health alerts.

WORKING GROUP - 3

Departments

- | | | |
|------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------|
| 1. Department of Health and Family Welfare | 2. Women & Child Development Department | 3. Department of Medical Education and Research |
| 4. Sports Department | 5. Department of Agriculture and Farmers Welfare | 6. Swarn Jayanti Haryana Institute for Fiscal Management |
| 7. United Nations Development Programme | 8. Haryana State Rural Livelihood Mission | 9. Directorate of Higher Education |
| 10. Haryana State Pollution Control Board | 11. Haryana State Health Systems Resource Centre | 12. Haryana Agro Industries Corporation Limited |
| 13. Department of Revenue & Disaster Management | | |

Timeline

26/09/2023



First meeting with the Member Secretary at the Health Services Department, Sector - 6, Panchkula, Haryana.

22/02/2024



First meeting with the subgroup at the New Haryana Civil Secretariat, Sector 17, Chandigarh

21/03/2024



Strategic Foresight Workshop at Hotel Mountview, Sector 10, Chandigarh.



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