

# Healthcare Forward

" Where Concern Is Most Important "

April 2025

Healthy Beginnings, Hopeful Futures





World Health Organization

Vorld Health Day 2025

Healthy beginnings, hopeful futures.

**April 2025** 

## **Healthcare Forward**

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REAL WORLD. REAL LEARNING



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## Messages From The Advisors



#### Dr. Manish Kothari

Founder and President ISBR Group of Institutions

The immense and continual progress and contributions shown by the Healthcare Management students and alumni of ISBR Business School is thoroughly impressive and shows a true commitment towards a bright progressive future in the industry. The theme of this year's World Health Day, **"Healthy Beginnings, Hopeful Futures"** embarks a new perspective among the community on the cruciality of maternal and child health and how smaller initiatives help in achieving the Sustainable Development Goals by the year 2030. The contributions made by the students in this magazine is commendable and wish them a very bright way forward.



#### Dr. R. Narasimhan Dean ISBR Business School

The importance of personal empowerment in maintaining good health is emphasised in this publication. Recognising the need for improvement and strategies to improve health is not only a luxury but a basic component of wellbeing in the rapidly changing, health-challenged world of today. We hope that this magazine will inspire readers to take small steps towards promoting maternal and child health and support health equity. As you peruse the pages of this magazine, I hope you all have an inspiring and educational experience. Kudos to all of the learners and teachers that took part in this project.



#### Prof. Dilip Patel Management Advisor

ISBR Business School

With immense pleasure and appreciation, I offer my warmest regards to everyone who helped create this insightful journal. The quality of our Healthcare Management students' articles and their commitment to improving healthcare equity and accessibility are impressive. I sincerely hope that the topics highlighted by the students make each individual empathise with the current situation and work unitedly towards holding a better future for our community.



## Messages From The Advisors



#### Dr. A. R. Rajagopalan

Director - Strategy & Operations ISBR Business School

I want to take a moment to express my sincere appreciation for the incredible efforts by all the students, faculties and revered industry professionals who put into creating this magazine. The dedication and hard work in compiling such insightful content truly reflects students commitment to enhancing the community's knowledge and skills. This magazine is a testament to their creativity, collaboration, and passion for learning. Keep up the great work, and continue to strive for excellence. This initiative not only enriches the students minds but also encourages all other readers towards making small yet impactful contributions towards improving the disparities in the healthcare sectors.



#### Dr. Nila A Chotai Program Director ISBR Business School

With the publication of this year's issue, which focuses on the topic **"Healthy Beginnings, Hopeful Futures,"** I am happy to offer my best wishes in honour of World Health Day. As we examine the many viewpoints and views presented in these pages, let us not forget the enormous influence that every person can have on influencing the healthcare system and promoting the initiative towards maternal and child health. In addition to showcasing the breadth of expertise and creativity within our healthcare student body, this magazine demonstrates our commitment to supporting holistic growth and enabling people to put their health needs first. To every one of the contributors, congratulations! I hope your work continues to pique interest and propel constructive change in the healthcare sector.





## Editorial

Dr. Veena R Director - Healthcare Programs

Bringing new life to the world is considered as a rebirth of the mother as well. The woman undergoes a transformation-not just physically, but physiologically, emotionally, psychologically, socially, and spiritually. This is a journey of a woman's dream filled with excitement, happiness and anxiety. This phase culminates in happiness and celebrations in most of the families.

The World Health Organisation's this year's campaign re-emphasises the significance of 'Healthy Beginnings, Hopeful Futures', for every future mother and her family as an assurance of happiness and protection for any preventable losses and casualties. WHO calls for concerted efforts in educating and empowering the population on the matters of mother and child health through collaborative and action-oriented partnerships and investments between governments and communities.

The compassionate and intellectually charged Healthcare Management students, alums and faculty of ISBR Business School are in action through their thoughts, experiences, concerns and possible solutions penned for this magazine 'Healthcare Forward'. The articles are testimonial to their ability to speak-out, share and showcase their views and a promise to the society they relate with to contribute in improving healthcare delivery for the mothers and their tender ones-the bundle of joy.

Guiding them are the seasoned professionals of different walks of healthcare who have participated in enriching this magazine formulating the right combination of sharing their professional journeys, experiences in care delivery and research, and words of advice for everyone in general and the students in particular. We are blessed to have them on the board.

This magazine has tried to encapsulate the achievements and goals of the Indian government towards maternal and child health, professional contributions and dimensions of research, individual view-points and answers on different life stages of an individual towards good health. The journey is long and has already begun, with the young professionals marching for transforming Indian Healthcare towards Vikasit Bharat. We proudly present this magazine for the audience and their encouragement.

Happy reading!









## Mother and Child Health Programs in India: A Bird's Eye View

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**Dr. G.V. Nagaraj** MD, DPH, PGDHM, MIPHA, FIPHA Former Director, H&FWS, GoK, Bangalore

#### About the Author

**Dr. Nagaraj** graduated in medicine in 1969, obtained a postgraduate Degree and a Diploma in Public Health, and also a diploma in Hospital and Health Management. He worked for 33 years in Karnataka State Government service, in various capacities starting from the post of Medical officer in rural area through Deputy Director, Joint Director, Additional Director, Project Director and finally to the state level post as Director of Health and RCH Services. Also served as Director of State Training Institute. During this tenure, Dr. Nagaraj has done commendable work in Healthcare and Pulse polio programme. He worked as Chief consultant for World Bank projects. Dr. Nagaraj is among one of the Government doctors to be honoured with 'B.C.ROY Award' for meritorious performance in Government Service.

#### Introduction

April 7th of every year, we, the global communities are committed to observe World Health Day. This year in 2025, the *"Healthy Beginnings, Hopeful Futures,"* is the apt slogan declared by WHO focusing on healthy Mother and also healthy Newborn and Children survival across the globe. In spite, India having exceeded China in population size, her efforts in stabilizing population and parallelly focusing on mother, newborn and children health are worth remembering and definitely to be continued without any time limits. Towards ensuing this, a backdrop of family planning program and Mother, Newborn and Child health care over **century** in India is reviewed as under the following initiatives:

#### • Birth Control Initiatives

The Government of Mysore established two **Birth Control Clinics in Bangalore and Mysore** on 11th June 1930, to provide knowledge on and methods of contraception. Two lady doctors were authorized to educate women and teach necessary techniques. A sum of Rs 500/- was sanctioned for contraceptive appliances, which were supplied at cost price to those wishing to have them. This **'clinic centered' approach** was carried out discreetly without much publicity.

In 1931, a **Rural Health Training Centre** was established, and a malaria institute was also established in the state. Health services for civilians under British rule were inadequate, with an Infant Mortality Rate of 162/1,000 live births recorded during that time. Prior to Independence (1947), facilities for mothers and children were few and far between, with maternity and child welfare services initiated by voluntary organizations like Christian missionaries and the Family Planning Association of India. Deliveries were mostly conducted by untrained dais or relatives, leading to large newborn deaths within days of delivery. In subsequent years, participation from both voluntary agencies and the establishment of maternity hospitals at district and taluk levels improved accessibility of services to mothers and children. Primary health centers started providing comprehensive services, including immunization services and promotion of various family planning methods. However, the declaration of National emergency and coercion for sterilization in general and vasectomy in particular in 1977-78 setback the program, making it difficult to recover from the damage caused by the **'wrong implementation of a right policy'.** 

#### • Expanded Program on Immunization (EPI)

After the eradication of Small pox in 1977, <u>The Expanded Program on Immunization (EPI) was</u> <u>started in India in January 1978</u>, with the objective of reducing the incidence of Diphtheria, Pertussis Tetanus, Poliomyelitis, Tuberculosis and Typhoid fever by making vaccination services available to all children and pregnant women by 1990. Measles vaccine was prominently missing. Other selected diseases were to be included when and where necessary. It was also aimed to achieve self-sufficiency in the production of vaccines required for the program. The UNICEF assisted the program by supplying the various commodities such as Chemicals and equipments for DPT vaccine production centres, Vaccines (DPT) Refrigerators, immunization kits and training courses. Under the strategy of implementation of EPI, responsibilities of the governments (Appointing EPI officer at state level), delivery of immunization services, vaccine logistics and cold chain, Vaccine coverage surveys by 'cluster sampling' technique, training and health education materials were specified.

Lot of problems were encountered such as lack of coordination, carrying of vaccine vials in vanity bags by ANM's, Use of domestic refrigerators, inadequate Cold storage facilities in most places, frequent and long power cuts, Use of glass syringes requiring boiling, non-availability of preventive and maintenance services, difficulty in logistics, storage and distribution, shortage of contingency fund (for purchase of ice, Travelling allowance), large drop outs, absence of immunization cards and irregular submission of reports and so on. There was not much improvement in demographic indicators and also less enthusiasm to succeed.

In the meanwhile, the 1978 Alma-Ata declaration of <u>'Health for all by 2000 AD'</u>, recommended Primary health care approach for **'attainment by all citizens of the world by 2000 AD**, a level of health that will permit them to lead a socially and economically productive lives'. India also became signatory to the declaration. During this time, the international certificate for <u>Eradication of Small pox</u> was received, the family planning program was renamed as <u>National Family Welfare Program</u>.

Policy makers started seriously thinking about, evolving a policy for the first time in matters relating to health and family welfare and the outcome was drafting and dedicating a <u>'National Health Policy (NHP)-1983'</u> in which 17 goals were indicated along with policy prescriptions.

Despite the successful family welfare program covering maternity care, immunization, practice of family planning methods and MTP, there was <u>no appreciable decline in Infant mortality rate, and</u> <u>morbidity due to diarrhoea and pneumonia.</u>

#### • Universal Immunization program (UIP-1985-91)

The Universal Immunization Program (UIP-1985-91) was launched in 1985, supported by UNICEF, to tackle six vaccine preventable diseases (VPDs): Diphtheria, Pertussis, Tetanus, Measles, Poliomyelitis, and Tuberculosis. The program aimed to achieve 100% coverage of pregnant women and 85% of infants against VPDs by the end of the seventh five-year plan. The center provided vaccines, cold chain equipment, staff, and extensive training. A 'Technology Mission on Immunization' was set up, covering all aspects of immunization activity from research and development to service delivery.

Some of the positive and success stories of UIP include following the norm of one child, one vaccine, and one syringe, standardizing the vaccination schedule, using effective cold chain systems, holding regular immunization sessions on Thursdays, insisting on the right age, doses, and potent vaccine, and offering the vaccine at no cost.

The UIP also saw a decline in infant mortality and incidence of vaccine preventable diseases due to the potent vaccine. At the end of the program (1990-91), immunization levels increased from 10%-15% of pre-1985 levels to 90%-92%. UIP

Reporting from outreach and institutions was strengthened and streamlined for continuous data collection. The UIP is an example of how a government-delivered program became demanding, popular, and beneficial, benefiting millions of children and mothers and reducing morbidity and mortality from vaccine preventable diseases.

#### • UIP + or Child Survival and Safe Motherhood Program (CSSM)- 1991-92, 96-97

The epidemiological situation reveals that there has been an appreciable decline in the death of infants, children and also of mothers over the last three decades (i. e. between 60s and 90s). However, the rates are still a higher-ones compared to the efforts and expenditure incurred. There are several contributory factors for high mortality rates in young children such as low birth weight, unfavorable conditions and infections such as tetanus, measles, respiratory infections and diarrhoea. The maternal mortality rate is also unacceptably high, estimated to be one in every 250 pregnancies. The major immediate causes of maternal deaths are bleeding, anemia, post-delivery sepsis, toxemia, abortions and obstructed labor; the underlying factors being early marriage, early and too frequent child bearing and short spaced pregnancies in the context of low literacy levels, malnutrition and poor availability of proper maternity services.

The NHP -1983 in the context of global objective of HFA-2000 A.D. had set the following important goals (Apart from other 10 goals)

- Maternal mortality to below 2 per 1000 live births
- Infant mortality rate to below 60 per 1000 live birth
- Crude birth rate to below 21 per 1000 population
- Crude death rate to below 9 per 1000 population
- Child mortality (1-4yrs) from 21.2 to 10
- Proportion of low-birth-weight babies to 10% or less
- Couple Protection rate more than 60%

Many specific programs aimed at the elimination of the various factors responsible for infant, child, and maternal mortality were implemented till the end of 7th five-year plan as separate programs.

- Immunization against Vaccine Preventable Diseases
- Prophylaxis Against Nutritional Anemia
- Prevention of blindness due to Vit 'A' deficiency
- Oral Rehydration Therapy for control of deaths due to diarrhoea diseases
- Intensification of the Dai's training for improving prenatal and delivery care for domiciliary services
- Initiating an intensified program for the control of Acute Respiratory Infection
- Integrated Child Development Services scheme (ICDS) of Women and Child development department.





#### • Reproductive and Child Health program-October 1997

By this time, the program administrators realized that contraceptive target-oriented approach was not the right strategy, because, in spite of high acceptance of family planning services, the family size continued to be at 4+ since sterilization was accepted by a couple only after completing a family of 4-5 children. the International Conference on Population and Development (ICPD) held in Cairo (**1994)** floated the vision of holistic approach to Reproductive Health and helped to develop the RCH program in India, a radically changed policy decision, implemented in the form of Target Free Approach (**1996)** later changed to Community Needs Assessment approach. RCH program was formally launched in **October 1997** with an aim to provide beneficiaries <u>need based, client centred, demand driven, and high Quality, integrated services as a 'life cycle' approach</u> through decentralized planning with the ultimate aim of population stabilization. The service components included: ANC, natal and PNC, and emergency obstetric care and referral mechanisms for high risk deliveries, essential newborn care, and disease and nutritional deficiency management.

Goal S	Set
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Indicators	NRHM (201211TH PLAN	RCH-II Goals(2004- 2009)	National population policy 2000 (by 2010)	Millennium DevelopmentGoals
Population growth	16.2% (2001-11)	16.2% (2001-11)	-	-
IMR	30/1000	35/1000	30/1000	-
Under five mortality	-	-	-	Reduce by 23 from 1990
Rate				levels
MMR	100/1,00000	150/1,00000	100/1,00000	Reduce by ¾ by 2015
TFR	2.1	2.2	2.1	
CPR	63%	65%	Meet 100% needs	

#### Paradigm Shift in Policy under RCH

Bottom-up planning, decentralised implementation of programs, strengthening infrastructure, capacity building at district level for planning, implementation, Management Information System (MIS), and concurrent evaluation

- 1. Withdrawal of financial incentives to providers with the objective of improving quality of care as the incentive for utilization of services.
- 2.Introduction of `Essential Reproductive and Child Health Program' that includes Family Planning, safe motherhood and child survival and management of RTI/STD services and adolescent health.
- 3. Direct financing of states through the Standing Committee on Voluntary Action (SCOVA) with the objective of avoiding delays in implementation due to budgetary constraints.
- 4. Involvement of NGOs and private sector in the delivery of services in the public sector.
- 5. Involvement of Indigenous Systems of Medicine (ISM) Practitioners in delivery of RCH services to improve the access to services, especially in the rural and tribal area.



The National Rural Health Mission (NRHM) was launched in India on 12th April 2015 to provide healthcare to the rural population. It aimed to reduce IMR and MMR by 50% over a seven-year period and universalize access to public health services such as women's health, child health, water, sanitation, immunization, and nutrition. The mission marked innovative schemes like the Janani Suraksha Yojana (JSY) and mainstreaming of AYUSH. It also emphasized Public Private Partnerships and Integrated Disease Control. The NRHM core strategies included establishing community health workers (ASHA), infrastructure improvements, capacity building, public private partnerships, risk pooling and social health insurance, and decentralized planning. The plan of action included increasing public expenditure on health, reducing regional imbalances in health infrastructure, pooling resources, integrating organizational structures, optimizing health manpower, decentralization and district management of health programs, community participation, and induction of management and financial personnel into the district health system. The goal is to improve the availability and access to quality healthcare, especially for rural areas, the poor, women, and children.

#### • National Urban Health Mission-2013

The National Urban Health Mission (NUHM) is a sub-mission of the National Health Mission (NHM) that aims to improve the health status of urban populations, particularly women- perinatal, neonatal, and children of poor families in urban slums and vulnerable areas. The mission focuses on providing comprehensive healthcare services, strengthening public health systems, promoting community involvement, improving access to healthcare, promoting preventive measures, and utilizing urban primary health centers (UPHCs) and urban community health centers (U-CHCs). NUHM also emphasizes outreach services, training, capacity building, partnerships, and ICT solutions to improve healthcare delivery efficiency. The mission works in coordination with other health missions, such as the National Rural Health Mission (NRHM), and focuses on improving health outcomes, measured against Indian Public Health Standards for all health facilities. The mission's focus on community involvement, outreach services, training, and ICT solutions is crucial for its success.

#### Lessons learnt along the journey

- 1. Implement Good Governance, Nutrition Support, Sanitation, Perinatal & Neonatal Care, and Population Control with urgent interventions, possibly through a World Bank Project.
- 2. Prioritize Education, Employment, Equity, and Empowerment to enhance awareness, workforce participation, and HDI.
- 3. Replication of Best Practices from Indian States to World across

India's journey in maternal, newborn, and child health is worth praising, and portrays as both a reflection of its resilience and a roadmap for progress. The picture presented here from discreet birth control clinics to ambitious national health missions, only showcases that our country has traveled a long path—marked by both challenges and triumphs. The commitment to universal health access, empowerment of women, child welfare, and family wellbeing is no longer just a policy goal—it is a national ethos.

The road ahead may still have hurdles, but the vision is clear. By blending the wisdom of past experiences, the strength of community participation, the effectiveness of targeted interventions, and the inspiration from global best practices, India is poised to transform every healthy birth into a hopeful beginning. Let this World Health Day be a reminder that in every mother's smile and every child's heartbeat lies the promise of a better, stronger, and healthier future—for India and for the world.





## A Pediatrician's Perspective on Maternal and Child Health



Dr. Maninder Singh Dhaliwal Pediatrician | Pediatric Intensivist Amrita Hospital, Faridabad President, Delhi IAP PICU Chapter Secretary, PediSTARS

#### **About the Author**

**Dr. Maninder Singh Dhaliwal** is a Senior Consultant and Clinical Lead in Paediatric Intensive Care and Respiratory Medicine at Amrita Hospital, Faridabad. A leading figure in paediatric critical care, he has pioneered PICU and respiratory services at top institutions, previously at Medanta – The Medicity Gurugram.

He holds an MD in Paediatrics, Diploma in Allergy & Asthma (CMC Vellore), and a Gold Medalwinning fellowship in Paediatric Intensive Care. His interests include paediatric liver transplantation, respiratory critical care, and patient safety—earning the First Asian Patient Safety Award in 2014.

An active academician, Dr. Dhaliwal is an instructor in several national and international critical care & bronchoscopy training programs. He has authored key textbook chapters and over 40 indexed publications in the field.

#### "Save a newborn or a child, and you don't just save a life; you save an entire lifetime."

#### Introduction

They say a journey of a thousand miles begins with a single step. In healthcare, that step is often a cry; the first cry of a newborn, a sound that holds the promise of a hopeful future. Across my career; through government hospitals, private setups, trust-run centers, and academia, one truth echoes: maternal and newborn health is the foundation of everything that follows. *World Health Day 2025's theme, "Healthy Beginnings, Hopeful Futures," resonates deeply, with all humanity especially us, pediatricians.* 

#### The Power of One: You and Me

You don't need a title to make a difference. Whether you're a pediatrician, surgeon, nurse, student, administrator, you can:

- Counsel expectant parents
- Encourage breastfeeding as nature's first vaccine
- Inform everyone about the importance of early screening and timely intervention
- Empower mothers not just with medicine, but with empathy

And here lies the importance of preventive medicine, which is much more stronger than any curative medicine. **Case in point:** A first-time mother in any setup is counseled during an antenatal visit about exclusive breastfeeding, maternal nutrition and vaccination. That 15-minute interaction saves her newborn from feeding myths, saves her from malnutrition and vaccination prevents so many diseases. These all complications never happened, because of right preventive counseling. *That is the power of preventive medicine, quiet, thankless, and often invisible.* 

We talk to parents about sleep safety, choking hazards, bike helmets, screen time, and the importance of vaccinations. But here's the catch: we rarely get to see the actual lives we've changed. There's no news, when a toddler doesn't tip over a TV. No media when a teen walks away from a bike fall with just a scrape. Because the bad thing never happened.

You'll never know which baby didn't die of Sudden Infant Death Syndrome (SIDS) because a parent followed your advice on safe sleep; or which child avoided lifelong disability or illness because they got their vaccines on time. That's the curse—and the beauty—of prevention: it works best when nothing happens. Vaccines? They're superheroes in plain clothes. They simply stand guard, blocking diseases before they reach the door. They are masters of making nothing happen—and that is everything. So let's embrace this invisible art. Let's give time to preventive counseling, not just prescriptions and procedures. There's silent magic in it. Let's be proud of being masters of nothing happening.

#### Training Beyond the Call of Duty

Beyond the OPDs and ICU shifts, there's another heartbeat; a passion for training others to save lives. Through IAP (Indian Academy of Pediatrics) and PediSTARS, we have had the privilege of leading Pediatric CPR and Neonatal Resuscitation trainings via programs like:

- SNAP (Simulation-based Neonatal and Pediatric Acute Care)
- STEP (Simulation Training for Emergency Pediatrics)
- NeoSim (Neonatal Simulation Training Initiative)
- IAP BLS/ALS courses (Basic and advanced life support)

These simulation-based workshops provide a safe space to practice high-stakes scenarios repeatedly, encouraging behavior change and improving team coordination under pressure.

**Case Example:** During community CPR training, a citizen never new how to respond to an unconscious child, and now after attending a BLS course, he successfully attended to a child who had a road traffic accident. The child survived because of the training, that's the power of these courses.

No rupees, no recognition, just the reward of knowing that somewhere, a life was saved because someone remembered their training. "You may forget the trainer, but not the baby saved because of the training."

#### Degrees and Directions: When Doctors & Others Turn Managers

More healthcare professionals today are earning MBAs alongside MBBS or MD degrees. Why? Because impact multiplies when clinicians also learn to manage systems and resources. From head of department to hospital director, it's a journey of spreadsheets and strategy, but the heart still listens. "In management, you trade your stethoscope for spreadsheets—but you still keep listening." Also, non-medico managers bring fresh perspectives to the table, seeing operational blind spots that clinicians might miss due to caregiving biases. Mixed leadership is not just ideal—it's essential. **Example:** In one PICU, a quality manager flagged the delay in blood gas reporting. It wasn't the machine, it was the transport time. A simple logistical change reduced turnaround time and improved outcomes. No medicine, just management.

#### The NGO Route: Where Passion Meets Purpose

Organizations like IMA (Indian Medical Association), IAP, and PediSTARS prove that when passionate people unite, real change happens. Campaigns don't just tick boxes; they save lives. From iron deficiency awareness drives to autism awareness to vaccination campaigns etc, supported by both government and private sectors, NGOs amplify the voice of public health. *"An NGO isn't just an organization; it's compassion in action."* 



#### From Lecture Halls to Bedside Action

Medical colleges are not just about degrees; they're incubators for innovation and empathy. By integrating simulation, encouraging maternal-child health research, and nurturing young minds, we grow not just doctors, but dreamers. "You're not just learning medicine, you're learning how to carry a community's hope." **Example**: A group of interns who attended a simulation workshop later conducted a quality improvement project on factors which cause delay in breastfeeding initiation in their labor room. Result: A significant improvement over six months. A simple study, but with definite results.

#### Where Do We Go From Here?

Let's aim higher. Together.

- Zero preventable maternal and child deaths
- Every mother heard It's a collective community effort to take care of 2 lives in one go.
- Every newborn held Safe delivery and early breast feeding.
- Every child healed Timely vaccination and right nutrition.

With tech, teamwork, and tenacity, let's keep training, teaching, collaborating; because we want to do it, for the right cause.

#### **One Final Thought**

Babies are the world's way of saying, "Don't give up yet." And every mother is the warrior who makes sure that message gets delivered safely. So wherever you are: hospital, classroom, or CPR training: Pause. Reflect. And Remember: "A hopeful future isn't something we wait for. It's something we build: heartbeat by heartbeat." Let's together as a community, make every mother and every baby count.





## The Human Gut Microbiome: the Panacea of Good Health



Dr. Fehmida Iyer Visnegarwala MD, MPH (JHU)

#### About the Author

Dr. Fehmida Iyer Visnegarwala, is a Public Health Expert, researcher, trainer and passionate teacher. Dr. Visnegarwala has worked extensively on Malnutrition, HIV/AIDS, Maternal and Child Health, and Adolescent Health. As Public Health Consultant to the JSW Foundation and Spirulina Foundation, Dr. Visnegarwala along with Dr. Veena, has worked on a project "Mission Against Malnutrition" wherein ~ 45,000 children and young mothers in Ballari District were intervened to eradicate child malnutrition.

Dr. Visnegarwala completed her MD in Internal Medicine. She has obtained a master's in Public Health from the Johns Hopkins Bloomberg School of Public Health, Baltimore. She has more than 15 years of experience as a clinician, researcher/investigator, and teacher as a faculty at Baylor College of Medicine, Houston, Texas.

#### Introduction:

The human gut microbiome, a diverse ecosystem of trillions of microorganisms, plays a critical role in maintaining overall health. These microbes, consisting of bacteria, viruses, fungi, and archaea, inhabit the gastrointestinal tract, influencing digestion, immune function, and even mental health. The human genome consists of about 23,000 genes, whereas the microbiome encodes over three million genes producing thousands of metabolites, which replace many of the functions of the host. In a 90 kilogram person there is 2.5 Kg of microbes. Advances in research have illuminated the profound impact of the gut microbiome on various diseases, making its maintenance a priority for health-conscious individuals. This article explores the relationship between the gut microbiome and health, its origins and its involvement in disease pathology, and strategies to preserve its integrity.

#### Where does one acquire the Microbiome from?

- Maternal Microbiome Transfer: Research suggests that microbial DNA and metabolites from the mother's gut, oral cavity, and reproductive tract may reach the fetus through the placenta, shaping early microbial exposure.
- **Birth Canal Exposure:** During vaginal delivery, the baby is exposed to maternal vaginal and fecal microbiota, including Lactobacillus and Bacteroides, which help colonize the newborn's gut.
- **Cesarean Section Birth:** Babies born via C-section have microbiomes more similar to the maternal skin and hospital environment, often with a lower diversity of beneficial gut bacteria. There is a practice in certain centres around the world to populate the infants mouth and nose with swabs from the mother's vaginal secretions.



- **Breastfeeding:** Breast milk provides essential bacteria (Bifidobacterium, Lactobacillus) and prebiotics like human milk oligosaccharides (HMOs) that nourish gut bacteria and support immune development.
- Environmental Exposure: After birth, the baby's microbiome continues to evolve based on interactions with caregivers, household members, pets, and diet.

However, one wonders where the overall microbial diversity on the planet comes from?

#### The Role of Soil in Maintaining Microbial Diversity

Soil serves as a fundamental reservoir of microbial diversity, influencing both environmental and human microbiomes. The microorganisms in soil play an essential role in maintaining ecosystem balance and, indirectly, human health. Key contributions of soil to microbial diversity include:

- **Reservoir of Microbial Diversity:** Soil harbors a vast array of bacteria, fungi, archaea, and viruses that contribute to overall microbial biodiversity.
- **Nutrient Cycling and Soil Health:** Soil microbes are involved in the breakdown of organic matter and nutrient cycling, which supports plant health and, subsequently, the human diet.
- **Human Exposure and Microbiome Development:** Direct contact with soil, particularly in natural environments, introduces beneficial microbes that help shape the human immune system and gut microbiome.
- **Agriculture and Gut Health:** The microbial composition of soil affects the microbiome of crops, which, when consumed, influence human gut microbiota.
- Antimicrobial Resistance and Soil Microbes: Soil contains antibiotic-producing bacteria like *Streptomyces*, which play a role in natural microbial competition and may influence human health. The herbicide glyphosate used widely is an antibiotic besides being a weed killer, therefore needs to be avoided.

Globally, over 52% of agricultural soil is already degraded, and 62% of soil in India has less than 0.5% organic content. This therefore is a health crisis. The **Save Soil Movement**, initiated by Sadhguru Jaggi Vasudev, is a global environmental campaign aimed at addressing soil degradation and promoting sustainable soil management. The movement highlights the critical role of soil in supporting biodiversity, food security, climate regulation, and human health. It seeks to raise awareness among governments, policymakers, farmers, and the general public about the urgent need to restore soil health through organic farming, reduced chemical usage, and conservation practices. The campaign advocates for policy changes to ensure agricultural lands maintain at least 3–6% organic content, essential for sustaining microbial diversity and preventing desertification.

#### The Composition and Functions of the Human Gut Microbiome

The gut microbiome is primarily composed of bacterial phyla such as Firmicutes, Bacteroidetes, Actinobacteria, and Proteobacteria. The balance among these microorganisms is essential for homeostasis. Key functions of the gut microbiome include:

- **Digestion and Metabolism:** Gut bacteria help break down complex carbohydrates, synthesize essential vitamins (e.g., B and K), and regulate fat storage.
- **Immune System Modulation:** The microbiome educates the immune system, distinguishing between harmful pathogens and benign microbes.
- **Neurological Influence:** The gut-brain axis links microbial activities to cognitive functions and emotional well-being, affecting conditions like anxiety and depression. There is a psycho-neuro-hormono-immunological axis which keeps our well-being intact.
- **Protection Against Pathogens:** A healthy microbiome competes with harmful bacteria, preventing infections and inflammation.





#### Gut Microbiome and Health

A well-balanced gut microbiome promotes overall health in several ways:

- 1. **Digestive Health:** Beneficial bacteria such as *Lactobacillus* and *Bifidobacterium* aid in breaking down fiber and preventing constipation or diarrhea.
- 2. **Immune Support:** The microbiome influences immune cell activity, reducing the likelihood of autoimmune diseases and infections.
- 3. **Cardiovascular Benefits:** Some gut bacteria regulate cholesterol levels and reduce inflammation, lowering the risk of heart disease.
- 4. **Mental Health and Cognition:** Microbial metabolites, like short-chain fatty acids (SCFAs) and neurotransmitters, contribute to mental well-being.

#### Gut Dysbiosis and Disease

Disruptions in microbial balance, known as dysbiosis, are associated with numerous diseases:

- **Gastrointestinal Disorders:** Conditions like irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), and Crohn's disease have been linked to altered microbiota composition.
- **Metabolic Disorders:** An imbalance in gut microbes is implicated in both under nutrition (as marasmus and kwashiorkor), and over-nutrition in the form of obesity, type 2 diabetes, and metabolic syndrome.
- **Neurodegenerative Diseases:** Emerging evidence connects gut dysbiosis with Alzheimer's, Parkinson's, mental health disorders and autism spectrum disorders.
- **Autoimmune Diseases:** Dysbiosis has been linked to conditions such as rheumatoid arthritis, multiple sclerosis, and lupus.

#### Factors That Disrupt Gut Microbiome Integrity

Several factors can negatively impact the gut microbiome:

- **Poor Diet:** Excessive consumption of processed foods, sugars, and artificial additives can reduce microbial diversity.
- Antibiotic Use: Frequent or unnecessary antibiotic use can deplete beneficial bacteria. Antibiotic use for animal fattening in the animal husbandry industry is a big source of antibiotic introduction in the general population.
- Chronic Stress: Stress affects gut motility and alters microbial composition.
- Lack of Physical Activity: Sedentary lifestyles are associated with reduced gut microbiota diversity.
- **Environmental Toxins:** Pesticides, heavy metals, and pollutants may disrupt gut microbial equilibrium.

#### Strategies to Maintain a Healthy Gut Microbiome

Maintaining a balanced microbiome is essential for overall well-being. The following strategies can support gut health:

#### 1. Adopting a Gut-Friendly Diet

- Increase Fiber Intake: Whole grains, legumes, fruits, and vegetables provide prebiotics that nourish beneficial bacteria.
- **Consume Fermented Foods:** Yogurt, kefir, kimchi, sauerkraut, and miso introduce probiotics that enhance microbial diversity.
- Limit Processed Foods and Sugars: These can promote harmful bacterial overgrowth.

There is evidence which suggests that change in diet can impact positively on psychiatric disorders.





#### 2. Using Probiotics and Prebiotics

- **Probiotics:** Supplements containing *Lactobacillus* and *Bifidobacterium* species can restore microbial balance, though the data on its use are in infancy.
- **Prebiotics:** Foods like garlic, onions, bananas, and asparagus support the growth of beneficial bacteria. *Spirulina* which is a blue green algae has been shown to be an effective prebiotic which can help in under-nutrition, in a large field level trial we had conducted in Bellary district as part of the Mission Against Malnutrition funded by JSW as part of their CSR project.

#### 3. Managing Stress Effectively

- **Mindfulness Practices:** Meditation, deep breathing, and yoga can reduce stress-induced gut disturbances.
- Adequate Sleep: A proper sleep cycle helps regulate gut bacteria and prevents dysbiosis.

#### 4. Engaging in Regular Physical Activity

• Exercise promotes microbial diversity and increases the production of beneficial metabolites.

#### 5. Avoiding Unnecessary Antibiotics

• Use antibiotics only when prescribed to prevent the depletion of beneficial bacteria.

#### The Role of Ayurveda in Maintaining Gut Microbiome Integrity

Ayurveda, the ancient system of medicine, emphasizes the balance between body, mind, and environment, including gut health. Ayurvedic principles support gut microbiome integrity through:

• Dietary Practices, use of medicinal herbs, Agni (digestive fire) regulation, Panchakarma detoxification, lifestyle routine with yoga and meditation.

#### Conclusion

The human gut microbiome plays a crucial role in maintaining health and preventing disease. Its influence spans digestive health, immunity, metabolism, and even mental well-being. However, various factors, including poor diet, antibiotic overuse, and stress, can disrupt microbial balance, leading to health complications. Additionally, soil serves as a vital source of microbial diversity, indirectly influencing human health through diet and environmental exposure. By adopting a fiberrich diet, consuming probiotics and prebiotics, managing stress, and engaging in regular exercise, and Ayurvedic practices, individuals can maintain gut integrity and promote overall wellness. Future research will continue to unravel the complexities of the microbiome, offering novel therapeutic strategies for a wide range of diseases.

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# ARTICLES by Students and Faculty



Mother and Child Health: Current Scenario and the Government of India's Initiatives

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#### **Maternal & Child Health**

Improving birth outcomes by supporting women, mothers, and babies.

The theme for World Health Day 2025, "Healthy Beginnings, Hopeful Futures," strikes a deeply personal chord for India. It reflects a reality that many women face across the country—one where a healthy pregnancy and safe childbirth are not guaranteed for every woman, despite the immense strides we've made. For a nation as vast and diverse as India, ensuring that every mother and newborn has a healthy start is not just a healthcare goal, but a moral imperative.

While we've made progress, the statistics are still heartbreaking. Over 45,000 women in India lose their lives each year to pregnancy and childbirth complications, and more than 600,000 newborns die within their first month. These are not just numbers—they represent mothers, fathers, families, and communities torn apart by preventable tragedies. Every one of these deaths carries with it untold heartache, leaving behind a ripple of loss that echoes for generations. This is a harsh reminder of the work still left to do.



Mr. Abhishek Acharya Batch 2024-26

The challenges we face in maternal and newborn health are numerous and complex. For many women in India, especially in rural and marginalized communities, the risks are compounded by a lack of access to timely, lifesaving care. Imagine being in a remote village, far from any healthcare facility, and knowing that if something goes wrong during childbirth, help is just too far away. Complications like excessive bleeding, hypertension, or infections could quickly become life-threatening without skilled medical assistance. Sadly, this is the reality for far too many women.

On the infant side, premature birth, birth asphyxia, and infections remain the leading causes of death. These deaths are particularly tragic because many of them are preventable with better healthcare, better access, and better care during pregnancy and childbirth. What makes it even harder is that these losses are concentrated in rural areas, where the gap in healthcare access is widest.

Healthcare Forward - April 2025



It's not just about healthcare—it's about opportunity. Every mother who dies, every newborn who doesn't survive, represents a future that is lost. When you think about it, these are not just statistics. These are lives cut short, potential untapped, families devastated. As we push forward with efforts to address maternal and newborn health, we're not just saving lives—we're investing in the future of our country. Every healthy birth means more potential, more opportunity, and a brighter tomorrow for all of us.

In India, the road ahead is long, but the focus must remain on closing this gap, particularly in rural and underserved areas. Every woman deserves access to the care she needs to ensure a safe pregnancy and childbirth. Every child deserves the chance to grow up healthy. This World Health Day, let's remember that the work isn't over, and we all have a part to play in ensuring that every mother and child gets the healthy beginning they deserve.

## How India Has Responded: Key Initiatives and Policies

India's commitment to improving maternal and newborn health has led to the introduction of several impactful health programs and policies. These initiatives are critical in addressing both immediate healthcare needs and the broader social factors that affect maternal and child health.

## 1. National Health Mission (NHM): Building Healthcare at the Grassroots Level

Launched in 2005 as the National Rural Health Mission (NRHM) has been instrumental in strengthening healthcare in India, particularly in underserved and rural areas. NHM focuses on skilled birth attendance, emergency obstetric care, and newborn health services critical components in saving lives during childbirth.

#### **Key Achievements:**

• Institutional Deliveries: The NHM has contributed to a significant rise in institutional deliveries in rural areas. As of 2021, institutional deliveries have increased to around 80% in rural areas, up from about 40% in 2005.

- Healthcare Centres: The mission has led to the establishment of over 150,000 subcentres and 50,000 primary health centres, significantly improving access to healthcare in rural and underserved regions.
- **Community Health Workers:** NHM has trained over 1.5 million ASHA workers, who are playing a critical role in educating women about maternal and child health and encouraging them to seek proper healthcare during pregnancy.

#### 2. Janani Suraksha Yojana (JSY): Encouraging Institutional Deliveries

Introduced in 2005, Janani Suraksha Yojana (JSY) is a cash incentive program designed to encourage institutional deliveries. It aims to make childbirth safer for women by providing financial support for institutional deliveries, particularly for women in rural and economically disadvantaged areas.

#### **Key Achievements:**

- As of 2020, over 120 million women have benefited from JSY.
- Institutional Delivery Rate: Since the introduction of JSY, institutional deliveries in India have increased significantly. In 2020, more than 80% of deliveries took place in health facilities, up from approximately 40% in 2005.
- **Reduced Maternal Mortality:** The program has been instrumental in reducing maternal and neonatal mortality rates, contributing to the overall decline in maternal deaths in India by 70% between 2000 and 2017.

#### 3. Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA): Free Antenatal Care for All

Launched in 2016, the Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) aims to provide free antenatal care to every pregnant woman, with a particular focus on rural and remote areas. This program offers free health checkups, screenings for pregnancy-related complications, and guidance on essential care during pregnancy.





#### **Key Achievements:**

- By 2020, the PMSMA had reached over 18 million women, with significant uptake in rural areas.
- Increased Antenatal Visits: The initiative has encouraged more women to attend at least four antenatal visits, improving maternal health monitoring and early identification of complications.
- Improved Awareness: PMSMA has raised awareness of the importance of early prenatal visits, leading to better management of pregnancy-related complications, and helping to reduce maternal morbidity and mortality.

## 4. Newborn Action Plan (2014): Focusing on Critical Newborn Care

India's Newborn Action Plan, introduced in 2014, aims to reduce neonatal mortality by focusing on key practices such as early breastfeeding, kangaroo care, and management of infections.

#### **Key Achievements:**

- **Reduction in Neonatal Mortality:** India has seen a 60% reduction in neonatal mortality between 2000 and 2019, from about 50 deaths per 1,000 live births to 22 deaths per 1,000 live births in 2019.
- Critical Newborn Care: Since the introduction of the Newborn Action Plan, over 90% of health facilities in India now offer essential newborn care practices like early breastfeeding and kangaroo care.
- **Improved Health Outcomes:** The plan has significantly contributed to improved survival rates for preterm and low-birthweight infants, particularly in rural areas with limited access to healthcare.

#### 5. Maternal and Child Health (MCH) Handbook (2015): Ensuring Consistency in Care

The Maternal and Child Health (MCH) Handbook, introduced in 2015, ensures consistency in care throughout pregnancy, childbirth, and the postpartum period. It helps healthcare providers and families track the health of both mothers and babies, ensuring that key interventions and health screenings are not missed.

#### Key Achievements:

- The MCH Handbook has been introduced in over 14 states and is now being used by millions of women and healthcare providers across India.
- Improved Continuity of Care: The handbook has improved the continuity of care, ensuring that women receive consistent and high-quality care throughout the pregnancy and postnatal period.
- Tracking Health Indicators: It has also improved health indicators by tracking crucial information like blood pressure, fetal growth, and nutritional status, helping to prevent complications before and after childbirth.

#### The Role of Midwives and Skilled Health Workers

Midwives and skilled health workers are central to ensuring safe births and reducing maternal and newborn mortality in India. Recognizing their importance, India has significantly invested in midwifery training and skilled health workers to strengthen the workforce and improve maternal and child health outcomes.

#### **Key Achievements:**

- **Midwifery Training:** India has trained over 15,000 midwives to manage deliveries, provide emergency care, and offer prenatal and postnatal support. The focus is on improving the quality of care for women during pregnancy, childbirth, and the postpartum period.
- **ASHA Workers:** Over 1.5 million ASHA workers (Accredited Social Health Activists) have been trained to educate women in rural areas about safe childbirth practices, encourage timely medical checkups, and provide basic health services. These workers act as a crucial bridge between the healthcare system and remote communities.





#### The Economic Case for Investing in Maternal and Newborn Health

Investing in maternal and newborn health makes economic sense. As per the **World Health Organization (WHO)** and the **United Nations Population Fund (UNFPA)** reports for every  $\notin 1$  spent on improving maternal and newborn health in India, there is a return of  $\notin 9$  to  $\notin 20$ . For instance, when women are healthier during pregnancy and childbirth, they're able to return to their daily routines faster, contribute more to their families and communities, and raise healthier children. It's a ripple effect that strengthens the whole nation. Not only does investing in maternal and newborn health reduce avoidable healthcare costs later, but it also helps prevent complications that could have long-term financial implications, such as disabilities and chronic conditions. Healthier women are more productive, contribute to the workforce, and raise healthier families.

By continuing to invest in healthcare infrastructure, expanding access to skilled care, and addressing the broader social determinants of health, India can significantly reduce the burden of maternal and newborn deaths. This will not only improve the quality of life for millions of women and children but also support India's long-term economic growth and stability.

#### The Way Forward: Sustaining Progress

While India's journey toward improving maternal and newborn health has made impressive strides, there is still much to be done. Strengthening healthcare systems, especially in rural areas, is essential to ensuring that every woman and newborn receives the care they need. Investing in training healthcare professionals, expanding neonatal care services, and addressing the social factors that affect health are key to achieving further progress.

On this World Health Day 2025, India must renew its commitment to advancing maternal and newborn health. With continued investment, innovation, and attention to emerging challenges like climate change, we can ensure a healthier, brighter future for every mother and child in the country.





The journey of a child's first 1,000 days is more than just biological growth—it is a profound emotional, physical, and psychological transformation for both the baby and the mother. It begins even before conception, as hopeful parents prepare for the arrival of new life.



#### Laying the Foundation: Preconception & Pregnancy Care

Even before pregnancy, preconception care sets the stage for a healthy future. Parents-to-be assess their lifestyle, nutrition, and overall wellbeing with the guidance of healthcare providers. Government programs like Mission Parivar Vikas empower couples with reproductive health knowledge, helping them make informed choices.

Once pregnancy is confirmed, Antenatal Care (ANC) becomes the guiding light, ensuring regular check-ups, screenings, and a well-balanced diet for the mother. Programs like Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) offer free ANC check-ups on the 9th of every month, providing essential services to expectant mothers. During these testings and regular ultrasounds are performed to determine the fetal growth of the baby. In case the medical practitioners find any growth as abnormal or which can lead to harm to the baby or the mother, they may advice the mother to undergo few noninvasive tests such as the fetal heartbeat, and invasive procedures such as Amniocentesis and Chorionic Villus Sampling (CVS) to determine any genetic deformities of the baby or fetus. These tests and ultrasounds are strictly regulated, audited and practiced under the Preconception & Pre-natal Diagnostic Techniques (PCPNDT) Act. The PCPNDT act was implemented initially to prevent sex-selective abortions and ensure ethical medical practices. The act plays a crucial role in protecting the rights of unborn girl children, fostering a future of gender equality and safe procedures being performed on expectant mothers. It may also help the medical practitioner to decide the further course of treatment or abortions in case of any abnormalities found.

For high-risk pregnancies—such as those with gestational diabetes, hypertension, or preterm labor risks—specialized care and monitoring are vital. Safe parenting practices, including birth preparedness plans, emergency medical contacts, and mental health support, help families navigate complications with confidence.

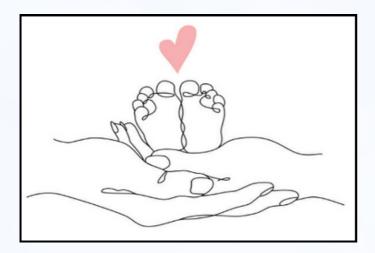


High Risk Pregnancies are dealt with utmost care and if the organizations are not equipped for it, they must refer the mother to a tertiary care hospital for further treatment. As an expectant mother undergoes a lot of hormonal changes, nutrition of the mother determines the health of the baby and effectiveness of the nutrients and antibodies formed in the breast milk. For the same reason, during the antenatal care being planned, an experienced dietician is preferred to make the growth chart and requirement of the patient.

#### Birth & The Early Days: A Delicate Transition

The moment of birth is both exhilarating and overwhelming. With the recent law allowing birth companions in hospitals, mothers can now have a trusted partner by their side during labor, offering emotional reassurance. The focus on immediate postnatal care is equally important, ensuring skin-to-skin contact, early initiation of breastfeeding within the first hour, and thorough health assessments for both mother and baby.

Breastfeeding plays a central role in an infant's early development. Indian culture has long emphasized six months of exclusive breastfeeding, followed by the sacred tradition of Annaprashana (introduction of solid foods), which symbolizes a child's journey into nourishment and strength. A baby's diet significantly impacts growth, immunity, and cognitive development. Traditional weaning foods like dal ka pani, mashed fruits, and ricebased or ragi porridges provide essential nutrients, building the foundation for a healthy life.





#### Immunization & Infant Care: Protecting the Future

Immunization is a non-negotiable pillar of child health. The World Health Organization (WHO) recommends a series of vaccines, including BCG, DPT, Polio, Measles, and Hepatitis B, to protect against deadly diseases. Under India's Universal Immunization Programme (UIP), vaccination rates have significantly improved, reducing infant mortality. According to WHO, immunization prevents 4-5 million deaths annually worldwide. Ensuring timely vaccinations is a collective responsibility of parents, pediatricians, public health professionals and community health workers.

For babies born prematurely or with medical complications, postnatal care requires extra attention. Neonatal Intensive Care Units (NICUs) provide specialized monitoring, and pediatric protocols emphasize regular growth tracking, developmental screening, and infection prevention to ensure the well-being of vulnerable infants.

The Mother's Well-Being: Nurturing the Nurturer While the baby grows, the mother's journey doesn't pause. Postpartum care is crucial, addressing both physical recovery and mental health. In India, where postpartum depression (PPD) is still underrecognized, programs like Mothers' Absolute Affection (MAA) aim to spread awareness about maternal mental health. Families play a key role by providing emotional support, nutritious meals, and a stress-free environment for new mothers.

#### A Collective Effort for a Brighter Future

The journey of a child's first 1,000 days is not just about survival—it is about thriving, learning, and growing in a safe and nurturing environment. Healthcare providers, government policies, and traditional wisdom together create a strong foundation for both mother and child. From preconception care to postnatal well-being, from immunizations to safe parenting, each step is a milestone in ensuring a healthier future generation.

With the right care, love, and support, this journey transforms into one of the most rewarding adventures life has to offer.

## Article **77** KNOW WHAT IS AT STAKE!

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In a world where "feminism" is widely discussed, its focus often remains on workplace equality while neglecting other fundamental inequalities women face. One of the most basic needs for women—especially those who menstruate—is a safe space to discuss gynaecological health and access to hygienic washrooms.

In conservative yet developing countries like India, girls in Tier II and Tier III cities still struggle to voice concerns about menstrual and maternal health. Information on gynecological health remains scarce and stigmatized in these areas, making awareness and education essential.

To address such issues, the WHO and the American College Obstetricians & of Gynecologists (ACOG) designated January 23rd as Maternal Health Awareness Day. The study by ACOG found that 80% of maternal deaths are preventable, with 50% occurring in the first year of postpartum. The 2025 focus is on reproductive freedom and reducing maternal deaths, which remain disproportionately high in low-income regions. In 2020, the Maternal Mortality Ratio (MMR) was 430 per 100,000 live births in low-income countries, compared to just 13 in high-income nations. This stark contrast highlights inequalities in healthcare access and the gap between rich and poor.

Key contributors to maternal deaths include inadequate healthcare resources, lack of trained professionals, and social or economic barriers. These factors span governance failures, economic hardships, and cultural constraints. To combat this, the WHO aims to reduce MMR to 70 per 100,000 live births by 2030 (Sustainable Development Goal 3.1). Achieving this goal requires strengthening healthcare systems, increasing trained professionals, and expanding universal health coverage to ensure timely and skilled maternity care.

Ms. Anandita D. Raju

Reproductive freedom is crucial for reducing MMR. Ensuring access to family planning and contraceptive services empowers women to make informed reproductive choices, preventing unintended pregnancies and associated risks. Comprehensive sex education in schools can further equip young individuals with knowledge to make informed decisions about their reproductive health. inequality, Addressing gender breaking cultural barriers, and enforcing policies that protect reproductive rights are equally essential.

The 2025 World Health Day theme, "Healthy Beginnings, Hopeful Futures," underscores the importance of maternal and child health in shaping a stronger future. Prioritizing early interventions, quality healthcare access, and tackling health disparities can significantly reduce maternal and infant mortality rates. By investing in equitable healthcare solutions, the goal is to ensure every woman experiences a safe pregnancy and every child gets a healthy start in life, fostering resilient generations.



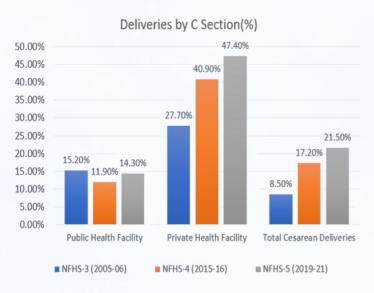
Cesarean sections (C-sections) have become a global norm, with rates skyrocketing over the past three decades. In India, the National Family Health Survey (NFHS) 5th round (2019-21) the numbers are even more alarming—government hospitals report 14% of deliveries as C-sections, while private hospitals cross 47%; the NFHS 6th Round (2023-24) data is awaited. This far exceeds the 10-15% rate recommended by the World Health Organization (WHO, 2015).

Undoubtedly, Cesarean deliveries are a boon to the mothers to overcome complications hindering normal or vaginal delivery. However, convenience of scheduling a birth, fear of labor pain, and even financial incentives have triggered this rising trend. But beneath this seemingly "safe" alternative to natural birth lies an overlooked crisis: Surgical Site Infections (SSIs).

#### When a New Beginning Starts with an Infection

Surgical Site Infections (SSIs) are among the most common hospital-associated infections (HAIs). These infections can occur among mothers who underwent C-section. These infections can lead to severe complications, prolonged hospital stays, and even maternal mortality.

SSIs occur due to multiple factors—some preventable, others inevitable. Prolonged labor, emergency C-sections, obesity, diabetes, lack of preoperative antibiotics and poor sterilization protocols all increase infection risks. In a few cases, bacteria from contaminated surgical instruments, improper hand hygiene, or unsterile surgical techniques contribute to infections.



#### **Increasing C-section Rates in India**

The graph reveals a concerning surge in Csection deliveries in India, particularly within private health facilities, where rates have dramatically increased from 27.70% in 2005-06 to 47.40% in 2019-21, significantly exceeding the rates in public facilities which remain relatively stable around 14%. This disparity has driven the overall national C-section rate to 21.50%, more than doubling since 2005-06, suggesting potential overuse in the private sector and highlighting the urgent need for interventions to regulate practices and ensure medically justified procedures.





#### Hopeful Beginnings: A Call to Action for World Health Day

This year's World Health Day theme, "Hopeful Beginnings," urges us to reflect on safe maternal health practices. A newborn's journey should start with love, not infection.

#### What Can Be Done?

- Enhanced Infection Control Measures:
  - Strict sterilization protocols should be enforced in all surgical environments.
  - Hospitals must provide comprehensive post-surgical infection monitoring.
  - Strengthen CSSD & Infection Control Measures in all hospitals.
  - Strictly regulate C-section procedures and promote vaginal deliveries when medically possible.
- Educating Expectant Mothers:
  - Launch public health campaigns about the benefits and safety of vaginal birth.
  - Conduct counseling sessions in hospitals to reduce elective C-sections due to fear or misinformation.

#### C-sections save lives, but they should be the last resort

Even though one can take measures to treat and prevent SSIs among the C- section delivered mothers, it is prudent to embrace the natural delivery process when possible. A study conducted in 2018 revealed that out of 70 lakh cesarean sections performed nine lakhs were preventable unplanned Cesarean sections. As we embrace Hopeful Beginnings, let's ensure that the first chapter of a newborn's life is not overshadowed by avoidable infections and unnecessary surgeries.



## Understanding Pregnancy-Related Anxiety: Challenges, Causes and Solutions

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#### The Nature of Pregnancy-Related Anxiety

Pregnancy is often associated with excitement and anticipation, but for many women, it also brings deep anxiety and overwhelming fears. Pregnancy-related anxiety extends beyond normal stress, manifesting as intense worry about childbirth, the baby's health, financial security, and personal parenting abilities. Unlike general anxiety, this condition is specifically tied to physical, emotional, and psychological challenges of pregnancy. Studies suggest that 20-25% of pregnant women experience significant anxiety, yet it is frequently overlooked or dismissed as common stress. This lack of recognition leaves many women struggling in silence, affecting both their well-being and that of their unborn child. In the current world, where women are empowered enough to handle the workplace and home, new mothers find it difficult to adjust to the new addition and can feel pressured triggering their anxiety.

Dr. Gaganpreet kaur Batch 2024-26



#### Challenges and Risk Factors

Several factors contribute to pregnancyrelated anxiety, including financial instability, lack of education on pregnancy health, past traumatic experiences, and inadequate family or social support. Financial concerns play a major role, particularly for low-income women who worry about affording prenatal care, hospital expenses, and baby essentials. The uncertainty of job security, especially in workplaces with inadequate maternity leave policies. further exacerbates stress. Emotionally, women who lack a strong support system from their partners, family, or friends often experience heightened anxiety. Those with a history of miscarriage, stillbirth, or difficult previous pregnancies may also carry unresolved fears that make it difficult to approach the current pregnancy with confidence. Additionally, cultural and societal pressures to be a perfect mother can create unrealistic expectations, adding to the emotional burden. In the modern world, new parents who are ambitious often find it difficult to adjust to newer routines. Chances of miscommunication and disorientation can be a common reason for the anxiety faced by the women.

## The Role of Financial and Emotional Challenges

Financial and emotional stability are crucial for a stress-free pregnancy, but many expectant mothers face significant hardships in both areas. Financially, women may struggle with concerns about medical expenses, postnatal care, childcare costs, and employment security. Many low-income families lack access to quality healthcare, insurance, and paid maternity leave, which increases stress. Emotionally, a lack of partner support, family involvement, or community connections can leave a pregnant woman feeling isolated. Anxiety is further intensified for women who already have pre-existing mental health conditions or those who have experienced previous pregnancy complications.



The combination of financial stress and emotional strain can lead to sleep disturbances, reduced appetite, and even postpartum depression if left unaddressed. In the current 2020 world, with the increase in the cost of living post COVID-19 pandemic, the pressure of working women has increased towards establishing financial stability and providing care for her child. Though in certain countries, maternity leaves are provided more often than before, they are used at the 8th month of pregnancy till the baby turns 6 months old. This often leads to an anxiety towards adjusting to the career and may also amplify insecurity of a future promotion and hike in pay.

#### Education and Awareness on Pregnancy Anxiety

One of the biggest barriers to addressing pregnancy anxiety is the lack of awareness and education. Many women do not recognize their symptoms as pregnancy anxiety and may dismiss their fears as normal stress. These stresses can further lead towards improper nutrition digested by the mother which can be deemed fatal for the baby and mother. Proper education about pregnancy-related mental health issues can help women identify anxiety early and seek professional help. Prenatal classes, counseling, and community awareness programs can play a vital role in informing expectant mothers about coping mechanisms and available resources. Healthcare providers should also focus on mental health screenings as part of routine prenatal check-ups to detect and manage anxiety effectively.



#### The Importance of Family and Social Support

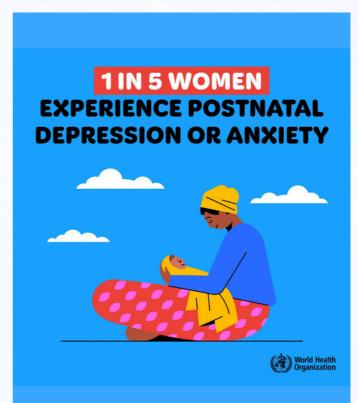
Family and social support are critical in reducing pregnancy anxiety. A supportive environment, where partners, parents, and close friends actively participate in the pregnancy journey, can significantly reduce stress. Encouraging open conversations about mental health and breaking cultural stigmas surrounding anxiety can help women feel validated and supported. Support groups and community-based initiatives can also provide a safe space for women to share their experiences and learn from others facing similar challenges.

#### **Solutions and Interventions**

Addressing pregnancy anxiety requires a comprehensive approach that includes medical, psychological and social interventions. Increased education and awareness about pregnancy-related anxiety can help women recognize their symptoms and seek support rather than suffering in silence. Access to professional counseling and therapy, such as cognitive behavioral therapy (CBT), has proven effective in helping women develop coping strategies. Healthcare providers should also conduct regular mental health screenings during prenatal check-ups to identify anxiety early and provide necessary interventions. Family and partner involvement is equally crucial -having and а supportive understanding environment can significantly reduce stress and build emotional resilience. Governments and healthcare institutions should prioritize affordable maternal mental health services, financial assistance programs, and workplace policies that support expectant mothers.

#### Conclusion

Pregnancy-related anxiety is a serious yet often neglected condition that can impact both the mother and baby. A combination of financial stability, emotional support, proper healthcare access, and societal awareness is essential in reducing the burden of anxiety during pregnancy. By fostering stronger family connections, improving mental health services, and addressing economic challenges, society can ensure that every expectant mother feels safe, supported, and confident throughout her pregnancy journey. No woman should have to navigate pregnancy anxiety alone. With the right interventions, fear can be transformed into strength, and anxiety into empowerment.







## World Health Day 2025: A Cry for Mothers and Babies in Rajasthan, India

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As the world marks another World Health Day, I find myself reflecting on a battle I never thought I would fight; one that left me broken, guilty, and unheard. Motherhood was supposed to be a joyous journey, but for me, it began with tears, self-doubt, and loneliness.

In the quiet town of Ajmer, Rajasthan, where traditions run deep and awareness about maternal health is painfully lacking, I gave birth to my baby boy. I had dreamed of holding him close, feeding him with my milk, and giving him the best start in life. But fate had different plans. My body, which carried him for nine months, betrayed me—I was unable to produce enough milk. My baby, unaware of my silent agony, latched onto the bottle instead, a habit he quickly formed because I had no other choice but to pump.

Nobody prepared me for this struggle. Despite being from the same fraternity/ field being unaware of such a situation, the doctors never spoke about the possibility of low milk supply. Anyone in my family hardly understood my pain; instead, they dismissed it, saying I simply wasn't "trying hard enough." People whispered, made fun of me, and questioned my womanhood. The weight of their words crushed me. Every feeding session became a reminder of my failure. I cried, helpless and lost, for months, consumed by the fear that my baby would grow up with a weak immune system because I could not provide him with what nature intended.



Dr. Ruchi Bokolia Batch 2023-25

But my story is not just mine; it is the story of countless women in Rajasthan and across the world. Women who are left to battle in silence, who are judged rather than supported. In our region, breastfeeding struggles are not acknowledged, and the emotional turmoil of mothers is dismissed.

This World Health Day, I urge global solidarity for mothers like me. We need awareness, medical guidance, and most importantly, empathy. No mother should cry herself to sleep feeling like a failure. No baby should miss out on a healthier start due to ignorance and stigma. The world must wake up and support the survival of mothers and babies; not just in words, but in action.

It is time to break the silence.



### Beyond Baby Blues: When Joy meets Darkness

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Postpartum depression (PPD) is more than just feeling sad after childbirth. Many new mothers experience short-term "baby blues," but PPD is deeper and lasts longer. It affects nearly **one in seven new mothers** worldwide, and in India, **22% of new mothers** face it. Sadly, many cases go unnoticed due to stigma and lack of awareness.

If left untreated, PPD can affect both the mother and her baby. It can cause emotional distress, difficulty in bonding, and even increase the risk of maternal suicide. Thus, recognizing the signs early is important.

#### Symptoms to look out For PPD:

- Feeling sad or crying often
- Constant tiredness and trouble sleeping
- Loss of interest in daily activities
- Difficulty in bonding with the baby
- Anxiety, irritability, or mood swings
- Thoughts of self-harm or harming the baby

Spotting these signs early and seeking help can make a huge difference.

#### What About New Fathers?

Postpartum depression isn't just a mother's issue, 1 in 10 fathers also experience it. Lack of sleep, financial stress, and pressure to "stay strong" make it harder for men to talk about their feelings. In India, **less than 10% of fathers seek help**, fearing judgment. This can lead to emotional detachment, substance abuse, or even suicidal thoughts. More awareness and support are needed to help new dads cope.

Ms. Pidaparthi Naga Krishna Sreeja Batch 2024-26



#### Why This Matters Beyond Families

- 10-15% of maternal deaths are linked to suicide, making PPD a public health concern.
- India reports nearly 20,000 maternal suicides each year, highlighting the need for mental health support.
- Untreated PPD affects work productivity, leading to economic losses for families and businesses.
- Healthcare administrators can make a difference by supporting routine mental health screenings, increasing access to counselors, and ensuring maternal mental health services are covered by insurance.



#### Simple Ways to Address Postpartum Depression

- **Regular Checkups:** Doctors should include mental health screenings in postnatal visits.
- Workplace Support: Companies should offer flexible maternity/paternity leave and mental health resources.
- **Public Awareness Campaigns:** Educate communities about PPD to reduce stigma.
- **Digital Mental Health Tools:** Use telemedicine and mental health apps to provide easy access to help.
- Family Support: Encourage open conversations and emotional support for new parents.

#### **Postpartum Care Practices Around the World**

Different cultures have unique traditions to help new mothers recover after childbirth. While each practice is different, they all focus on rest, nutrition, and family support.

- Mexico "Cuarentena" (40 Days of Rest): New mothers rest for about 40 days while family members take care of household chores and baby care. This allows mothers to recover physically and bond with their baby.
- China "Zuo Yuezi" (Doing the Month): Mothers stay indoors for a month, avoid cold foods, and follow a strict diet to aid recovery. They do not do housework, and older women in the family help care for the baby.
- Japan "Satogaeri Bunben" (Returning Home): Many new mothers return to their parents' home for extra care. This ensures they get proper nutrition, emotional support, and rest while adjusting to motherhood.
- Korea "Saam Chil Ill" (Three-Week Rest): For 21 days, mothers stay indoors and eat foods like seaweed soup, which helps with milk production and healing. Family members or postpartum care centers assist during this period.
- India 40–42 Days of Rest: New mothers traditionally stay indoors for about 40 days.
   Family members take care of daily tasks to help the mother rest and recover while protecting her and the baby from illness.

These traditions highlight the importance of postpartum care. No matter where a mother lives, she needs rest, good food, and emotional support to recover well after childbirth.

#### Speak Up and Seek Help

Postpartum depression is real, but it's treatable. A mother's mental health affects not just her but also her baby and family. When a mother struggles with depression, it can lead to emotional and developmental challenges for her child.

Seeking help is not a sign of weakness but a step towards recovery. New mothers should feel encouraged to talk to their doctors, family members, or counselors when they notice signs of PPD. Early intervention can prevent severe consequences and improve the mother's quality of life.

Support systems play a crucial role in a mother's mental well-being. Families, friends, and workplaces need to create a safe environment where mothers feel heard and supported. From ensuring new parents get enough rest to encouraging them to seek professional help when needed, collective support can make a difference.

On a larger scale, governments and healthcare institutions must implement better policies to support maternal mental health. This includes increasing awareness, integrating mental health checkups into routine maternity care, and making mental health treatment more accessible and affordable.

A mentally healthy mother is better equipped to care for her child, maintain relationships, and return to work without feeling overwhelmed. The sooner postpartum depression is identified and treated, the better the outcomes for both the mother and child. When a mother gets the help she needs, the entire family benefits. Addressing PPD should be a priority at all levels-personal, community, and national-to ensure healthier families and a stronger society.



Antimicrobial resistance or also known as AMR is when a drug previously effective on microorganisms becomes less effective. In other words, microorganisms- bacteria, viruses, fungi, parasites change over a period of time and become resistant to the antimicrobials antibiotics. antivirals, antifungals, and antiparasitics. Due to misuse and overuse of antimicrobials either in a hospital or outpatient settings, the chances of any microbe getting resistance towards the antimicrobials are high. This has now become a silent crisis in the healthcare industry. The World Health Day Theme for the year 2011 was 'Antimicrobial resistance: no action today, no cure tomorrow'.

Antimicrobial resistance (AMR) is one of the top global public health and development threats. It is estimated that bacterial AMR was directly responsible for 1.27 million global deaths in higher 2019. Due to the number of prescriptions being prescribed with high end antibiotics (irrational use) leading to а resistance makes treatment of common conditions and surgeries much riskier and further increasing the chances of infections in a patient. Patients with Cancer or Immunocompromised and Maternity are at a higher risk of infections and resistance than any other patient.

The 2022 Global Antimicrobial Resistance and Use Surveillance System (GLASS) report highlights alarming resistance rates among prevalent bacterial pathogens. Median reported rates in 70 countries of 37% for third-generation cephalosporin-resistant E. coli and 25% for methicillin-resistant Staphylococcus aureus are a major concern for hospitals to treat.

For women undergoing pregnancy and maternity, consumption of antibiotics can not only affect the body of the mother but also affect the baby. The antibiotics can also be transferred through lactation, and blood supply provided through the umbilical cord and are known as Antimicrobial Resistant Gene. Antimicrobial resistance can also be fatal to infants as the effect of these drugs can impact their short- and long-term health. Their first exposure to the antibiotics can lead towards resistance where the micro-organisms are stuck to the infants' gut and any other body sites. The resistance however can also be adapted through the womb of a women where the resistance can depend from the time of conception and the gestational age, any previous antibiotic exposure of the mother and consumption of antibiotics in early-life by the mother. Exposure to antibiotics can also lead towards conditions like asthma, inflammation and obesity in children.

As per a recent study, to treat skin, respiratory and gastrointestinal infections, doctors often prescribe antibiotics to infants almost 70% of the time. Prescription of antibiotics during late pregnancy can result in harming the baby and mother.

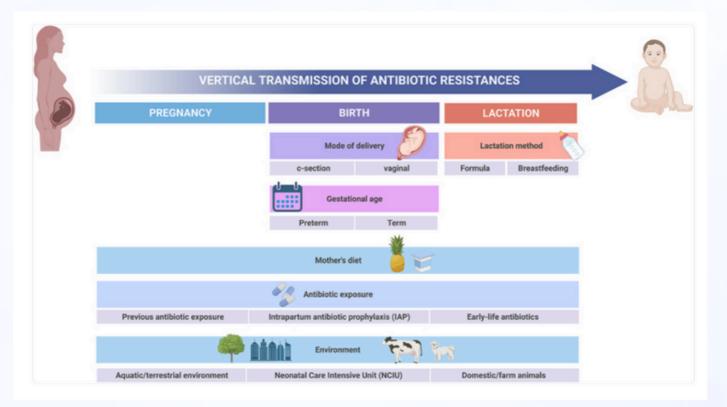


The worldwide problem of antibiotic resistance results in approximately 214,000 yearly newborn fatalities from septic infections, highlighting its devastating impact on infant health. Also, any early antibiotic treatment administered to a premature baby with low body weight will also affect the baby's growth and can result in an increased risk of necrotizing enterocolitis and also can lead to death.

In a recent study, the resistome of infants, which is the collection of antibiotic resistance genes in the gut, was found to have resistance to several broad-spectrum beta-lactam antibiotics, such as aztreonam, piperacillin-tazobactam, and cefepime.

It is known that mode of delivery has an effect on neonatal microbiota development. The gut microbiota of vaginal-delivered infants differs from those born via C-section over the first year of life, with higher levels of Bifidobacterium spp. and lower levels of Klebsiella and Enterococcus found in vaginally delivered infant. Alterations in the composition of vaginal microbiota can have a substantial impact on the newborn's gut microbiota. Moreover, Csection delivery has been associated with reduced breast milk microbiota diversity and richness.

To reduce the threat of AMR in newborns, hospitals must review the usage of antibiotics and high end antibiotics for gynaecology and the paediatrics department more stringently as part of the Antimicrobial Stewardship Programme. These prescriptions and the usage must later be discussed in the appropriate forums for review and effective protocols to be implemented by the hospitals. Also, hospitals can implement procedures where to dispense any high end antibiotics and other plain antibiotics for pregnant and infant patients, two levels of approvals to be taken so as to monitor the correct usage of drugs and prevent any misuse.



*Source:* Samarra, A., Esteban-Torres, M., Cabrera-Rubio, R., Bernabeu, M., Arboleya, S., Gueimonde, M., & Collado, M. C. (2023). Maternal-infant antibiotic resistance genes transference: what do we know? Gut Microbes, 15(1).



She was barely 18 when the doctor uttered the words: Polycystic Ovarian Disease (PCOD). What seemed like irregular periods, hair loss, acne, weight gain, and a hidden struggle with mood swings were in reality a condition which could change a girl's life.

"Why me? Why does my body feel and act like a stranger to itself?" she asked herself, gazing at her reflection.

PCOD is a reproductive problem involving other sets of stress such as emotional, physical, and mental struggles for 6 to 13% of young women who are of reproductive age. It overpowers the hormonal balance in the body causing difficulties in daily lives. The fact that every woman must understand is that facing and battling PCOD is not her defining moment but the actions taken to balance and fight the condition is what makes her unique and strong.

Those who are struggling with PCOD find great resonance to this year's World Health Day theme, "Healthy Beginnings, Hopeful Futures." This year's theme focuses on women and child health programmes, a part of the Sustainable Development Goals. WHO works with governmental and non-governmental partners to enhance public awareness related to PCOD, and to generate guidance to healthcare providers on how it can be identified and treated. In addition, WHO promotes research related to the most effective ways of preventing, diagnosing and treating infertility due to PCOD, and identifies the most important unanswered questions related to it.

As per the UNICEF data, PCOD is also far more common, at least in women. About one-third of all menstruating women around the globe have PCOD. According to a study conducted in Southern India and Maharashtra, about 9.13% of menstruating women in those regions suffer from PCOS, while 22.5% have PCOD. Although PCOS is a very uncommon condition prevailing in the current generations, often used as synonyms with PCOD. In PCOD the ovaries start releasing immature eggs that lead to hormonal imbalances and swollen ovaries, among other symptoms; while in PCOS, endocrine issues cause the ovaries to produce excess androgens, which makes eggs prone to becoming cysts.

Though information related to the conditions are readily available in today's AI generated world, to identify the condition appropriately is still a struggle for a lot of women. At times, especially in middle and low income countries, women often hesitate to find appropriate care providing organisations and often settle for a sub-par care which has now caused up to 70% of affected women remain undiagnosed worldwide with PCOS and PCOD. The reasons for this settlement can be identified to categories related to economic constraints and social pressures.

Dealing with PCOS can lead towards anovulation, infertility, strokes, heart problems among other long term physical and emotional health issues. Though the exact causes are still unknown in the 21st Century, the causes that are identified are: hereditary, insulin resistance, low grade inflammation, and excess formation of the hormone androgen.



To overcome the long-lasting consequences, a bright future is made possible by early diagnosis, thoughtful lifestyle modifications, and mental fortitude from the women. The solution is not in giving up but in celebrating small victories every day through following the below:

#### Eating for Healing:

Insulin levels and symptoms can be controlled with a well-balanced diet high in fibre, proteins, and healthy fats. Whole grains, leafy greens, and nuts are your strong partners in your battle, not just food!

#### Moving for Strength:

Exercise is about taking back control of your body and mind, not just about reducing weight. Combining yoga, strength training, and aerobic exercises will help you focus better and regulate your hormones.

#### **Resting for Renewal**:

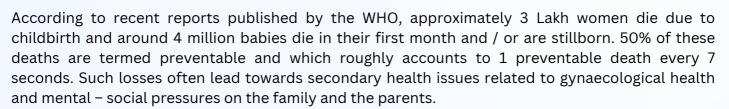
PCOD gets triggered by stress. Prioritise getting enough sleep, practise mindfulness, and concentrate on self-care to end the cycle of worry and fatigue.

#### Seeking Support:

Sharing your struggles with PCOD makes the journey easier. The burden of PCOD lessens with open conversations. You can feel less alone by speaking with loved ones, joining support groups or getting professional help. Lastly, to all the amazing women battling PCOD: Your journey is worthy of respect, and your strength is amazing. A healthy start will open up countless opportunities for you in the future. Even though the fight is difficult, you are stronger.



Every year, WHO's World Health Day theme revolves around spreading awareness on the Sustainable Development Goals that need to focus on due to factors such as slower growth towards achieving the goals by the year 2030. This year, the focus of the World Health Day is towards improving maternal, child and adolescent health and hoping for a brighter future. The aim is to help countries regain lost progress while showcasing new research and evidence that will enhance the health of women and babies globally.



Through all these, India has successfully initiated towards the reduction in the infant mortality rate from 58 per 1000 live-births in the year 2005 to 33 in the year 2017 and 21 in 2021. All this was possible due to the Indian Government's National Health Mission and initiation of the Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition (RMNCAH+N) in the year of 2013 after the Call to Action (CAT) Summit.

The strategy of RMNCAH+N promotes links between various interventions across thematic areas to enhance coverage throughout the lifecycle to improve child survival in India. The "plus" within the strategy focuses on: inclusion of adolescence as a distinct life stage within the overall strategy; linking maternal and child health to reproductive health and other components like family planning, adolescent health, HIV, gender, and preconception and prenatal diagnostic techniques; linking home and community-based services to facility-based services; ensuring linkages, referrals, and counter-referrals between and among various levels of health care system to create a continuous care pathway, and to bring an additive / synergistic effect in terms of overall outcomes and impact. The initiative aims towards reducing the mortality rates till 2025:

- Neonatal Mortality Rate to 16 per 1000 live-births
- Infant Mortality Rate to 28 per 1000 live-births
- Under 5 Mortality Rate to 23 per 1000 live-births

As per the recent study by the National Health Mission, there are 235 million children and adolescents in India and that they are in a quickly transitional phase where nutrition education, counselling, safe parenting methodology is of utmost importance. And to support, enhance and strengthen the care provided to these categories of our population, multiple partnerships are being implemented between the government and the healthcare industry such as the NABH 6th Edition specifically has dedicated a standard towards care of adolescents and a requirement of an adolescent clinic to be established in the hospitals awarded the NABH Accreditation that provides education on the topics mentioned above. In order to ensure holistic development of adolescent population, the Ministry of Health and Family Welfare launched Rashtriya Kishor Swasthya Karyakram (RKSK) on 7th January 2014 to reach out to 253 million adolescents - male and female, rural and urban, married and unmarried, in and out-of-school adolescents with special focus on marginalized and underserved groups. Key drivers of the program are community based interventions like, outreach by counsellors; facility based counselling; Social and Behaviour Change Communication; and strengthening of Adolescent Friendly Health Clinics across levels of care.

In conclusion, World Health Day 2025 highlights the critical need for improved maternal, child, and adolescent health to ensure a healthier, more hopeful future for all. With preventable deaths still a major challenge, initiatives like India's National Health Mission and the Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition strategy are making significant strides toward reducing mortality rates and improving healthcare access. The focus on adolescents through programs such as the Rashtriya Kishor Swasthya Karyakram and the integration of healthcare services demonstrates a holistic approach to addressing the needs of these vulnerable populations. By continuing to strengthen healthcare systems, increase awareness, and implement inclusive strategies, we can work toward a world where every woman, child, and adolescent has the opportunity to thrive in a healthy, supportive environment.





Menopause: Understanding and Managing Symptoms

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Ms. Vartika Gupta Batch 2024-26

Menopause is a natural phase in a woman's life, typically occurring in their late 40s to early 50s, marking the end of menstrual cycles. While this transition is a significant milestone, it can also come with a variety of symptoms that might be challenging to manage. Understanding these symptoms and exploring effective management strategies can greatly improve quality of life during this period.

Menopause is a natural phase in a woman's life, typically occurring in their late 40s to early 50s, marking the end of menstrual cycles. While this transition is a significant milestone, it can also come with a variety of symptoms that might be challenging to manage. Understanding these symptoms and exploring effective management strategies can greatly improve quality of life during this period.

One of the most noticeable changes is hot flashes—those sudden bursts of heat that come out of nowhere, making women feel flushed and uncomfortable. These can happen during the day or at night, often disrupting sleep. Simple lifestyle adjustments, like wearing breathable clothes, using fans, and keeping rooms cool, can help. If needed, women can also explore natural remedies or medical options with their doctor's guidance. Families and workplaces should recognize this and create environments where women can be comfortable without feeling embarrassed.

Mood swings can also be challenging. Hormonal changes can make women feel irritable, anxious, or even sad. This is where family and friends play a huge role. Just being patient, listening, and offering support can make a world of difference. Encouraging activities like yoga, meditation, or even just a walk together can help bring balance. Workplaces can also step up by creating awareness and offering mental health resources.

Sleep disturbances are another common struggle, often caused by night sweats or anxiety. A consistent bedtime routine, avoiding screens before bed, and cutting back on caffeine can help. Family members can support by creating a peaceful home environment and being understanding when a woman is having a rough night.

One aspect people don't talk about enough is vaginal dryness, which can affect intimacy. It happens due to lower oestrogen levels, leading to discomfort during sex. Women can use lubricants or talk to a doctor about treatments. More importantly, open and honest conversations with partners can remove any awkwardness and ensure that intimacy remains a positive experience.

Families play a crucial role in making menopause easier. Being patient and understanding, learning about menopause, and offering emotional support rather than dismissing mood swings or discomfort can create a more comfortable environment. Encouraging healthy habits such as exercise, balanced diets, and relaxation techniques can help manage symptoms. Sometimes, just being there and allowing women to talk about what they're feeling can be incredibly comforting.

Society also has a responsibility to create a more menopause-friendly world. Workplaces should consider flexible work arrangements and wellness programs to support women experiencing symptoms. Healthcare access should be improved so that women can easily see doctors, therapists, and explore treatment options without stigma. Community support, such as local groups and educational programs, can help women feel less alone in this journey. Menopause isn't the end of youth—it's a new beginning, a time of transformation. But to make it a positive experience, women need the support of those around them. With love, understanding, and the right resources, this phase can be one of strength and renewal. By being informed about these symptoms and exploring various management strategies, women can navigate this phase with confidence and grace. Let's ensure that no woman goes through it feeling unsupported. It's time to normalize conversations around menopause and embrace it as a natural and empowering part of life.



## Nutrition and Growth as Determinants of Neonatal Health

Batch 2024-26

Mr. Atharva Surwade

The neonatal period, the first 28 days of life, is the most susceptible period for a child's survival. In 2022, about 2.3 million newborns passed away during this period, and they accounted for almost 47% of total deaths for children aged below five years. The COVID-19 pandemic has had severe impacts on neonatal health. With restrictions, most mothers struggled with accessing adequate prenatal and postnatal care. Economic pressure caused food insecurity influencing maternal nutrition which in turn has direct effects on fetal growth. Working-class stress levels also increased as a result of job uncertainty, which caused a disconnect with the children's needs, which had a negative impact on breastfeeding and the health of the infant as a whole. Proper nutrition and mental health of mothers are key to healthy development of newborns.

Sita, a young mother in a small village, cradled her new baby daughter in her arms. Staring at her small fingers and soft skin, she thought, "How do I ensure that she grows up healthy and strong?" Like most mothers, she wanted the best for her baby but knew little of the significance of neonatal health and nutrition. She was also confused by the numerous **"gharelu nuskhe"** (home remedies) proposed by elders in the village. Some told her to give honey to the infant, while others suggested herbal mixtures. However, Sita was unsure whether these traditional practices were beneficial or harmful. Added to this, she didn't know the important role played by nutrition for the newborn to give a healthy start.





Nutrition is the backbone of a baby's health. From birth, breast milk provides all the nutrients needed for development, such as proteins, fats, vitamins, and minerals. Exclusive breastfeeding for the first six months is for World advocated by the Health Organization (WHO) as it contains antibodies that guard against infections. For those who cannot be breastfed, enriched formula milk is used instead, keeping them supplied with the essential nutrients.

The first 1,000 days (from pregnancy to two years of age) are when a baby's body and brain develop at a rapid pace. Nutrients such as iron, calcium, and omega-3 fatty acids are critical for brain growth, bone health, and muscle development. Malnutrition during this time may result in stunted growth and mental impairment. Insufficient necessary nutrients, like protein, iron, and omega-3 fatty acids, will impair brain growth, causing late development of learning capacity, low memory recall, and decreased levels of IQ. Furthermore, long-term malnourishment may undermine the immune system, increasing vulnerability to diseases and infections. hence influencing overall development and health of babies.

Vaccination also plays a crucial step or is a medical procedure that helps shield babies against severe diseases. When a baby is vaccinated, a weakened or inactive component of a disease-causing germ is injected into the body. This enables the immune system to recognize and combat the disease in the future. Examples of common vaccines are **polio**, **tetanus, pertussis, measles and diphtheria.** WHO stresses that early immunization can save the lives of newborns from **life-threatening infections.** 



Sita, upon learning these facts, began to give her baby nutritious food, vaccinated her in time, and took proper hygiene measures. With adequate neonatal care each baby can have a healthy start which will lead to a promising future. With an emphasis on good nutrition, immunization and health care, we can provide each child with a solid start in life, resulting in a healthier and happier future.





From Traditions to **Transformations: How Modern** Lifestyles of Indian Women **Shape Neonatal Health** 



#### Shifting from Sattvik to Snacky Culture

No doubt, the transition from traditional, nutritionrich diets to processed foods has impacted the health of all age groups in India. Previously, homemade foods like ghee ladoos, soaked almonds and iron-rich jaggery supported foetal development, but today many women rely on processed food, instant meals, excessive caffeine causing nutritional deficiencies and gestational diabetes. Studies in Delhi NCR link high junk food intake to low-birthweight infants, while emphasizing the need for better



Traditionally, Indian women experienced pregnancy with strong family support. Mother in laws contributed to nutritious home-cooked meals for mothers and would adhere to cultural practices. However, changing lifestyles and modern career aspirations, urbanization, and changing social dynamics have reshaped maternal health and has led to delayed pregnancies, majorly beyond 30-35 years, increasing risks of gestational diabetes, hypertension, and fertility challenges, with many turning to IVF treatments. Additionally, stressful work environments, irregular sleep, and unhealthy diets impact neonatal well-being. Although technology

advanced in India, it is imperative we foster early fertility awareness, improve prenatal care, and healthier lifestyles to

ensure positive maternal and neonatal outcomes.

Dr. Poonam Verma

Faculty

has

dietary awareness during pregnancy to ensure healthier maternal and neonatal outcomes.



#### Stress, Struggles, and Motherhood

The modern Indian woman finds it hard to balance office work with household responsibilities, and societal expectations and end up compromising their own health. This persistent stress during pregnancy has been associated with preterm births, low birth weight, and diminished immunity in newborns.



#### The C-Section Epidemic

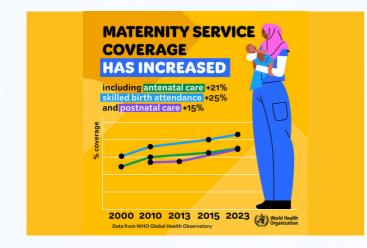
Research has also established links between Csection to developmental delays and therefore a higher chance of developing type 1 diabetes. We must encourage natural birth practices and an active lifestyle for improving maternal and neonatal health.

The shift to sedentary lifestyles has reduced physical activities unlike traditional living has contributed to a rise in C-section deliveries in India. This trend increases maternal postsurgery risks and impacts neonatal health, as infants born via C-section miss exposure to beneficial vaginal bacteria, raising their risk of asthma, allergies, obesity, and immune-related conditions.

#### **Breastfeeding : Challenge for New Mothers**

We must look at promoting workplace policies that support breastfeeding as it is extremely essential for improving neonatal health in India's changing society.

Earlier, Indian mothers would breastfeed for at least 1-2 years which promoted better immunity and nutrition for infants. However, with the rise of working women, many are forced to return to work within months, leading to increased reliance on formula milk, which lacks natural antibodies found in breast milk. This increases risks of infections, allergies, delayed cognitive development, obesity, and type 2 diabetes in infants. Breast milk contains **prebiotics** that help develop healthy gut flora. Without it, babies are at a higher risk of developing **digestive issues** and **gut infections**.



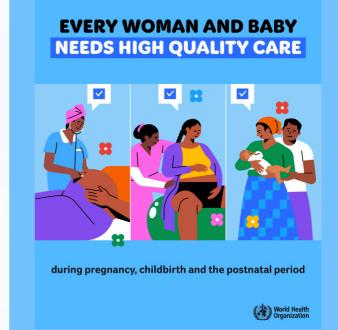
## Nutritional Considerations and Supplement Safety

Pregnant women should consult medical professionals before selecting supplements as recent studies have raised concerns regarding the presence of heavy toxic metals like lead and arsenic in these supplements. The concentration of these elements often contradicts the packaging label.

#### Digital Health Interventions

Digital health interventions are improving maternal and neonatal outcomes by promoting healthy weight gain and reducing complications like miscarriages and preterm births. Studies show that prenatal digital platforms offer education and telehealth services which in return have lowered NICU admissions by ensuring continuous care and personalized support. Integrating technology into maternal healthcare enhances pregnancy management, reflecting India's shift from traditional to modern healthcare solutions.

While modern lifestyles bring greater independence and opportunities, they also introduce challenges to maternal and neonatal health. **A balanced approach**, integrating traditional wisdom with modern medical advancements, is key to ensuring healthier generations in India.





## Bringing Life Amidst Chaos-Pregnant Women in War Zones



Ms. Meera Lilly Michael Alumna, Batch 2021-23 Reem Hospital, Abu Dhabi

Bringing a child into the world should be a moment of joy, hope, and anticipation. However, for thousands of women in war-affected regions, pregnancy is instead a time of fear and uncertainty. In today's world, armed conflicts continue to displace millions, and among the most vulnerable victims are pregnant women. As wars escalate, expectant mothers in conflict zones face unimaginable hardships—giving birth in unsafe conditions, struggling with malnutrition, and lacking access to essential medical care. The destruction of hospitals, restricted humanitarian aid and the psychological toll of war place both mothers and newborns at extreme risk and the World Health Day 2025 vision, "Healthy Beginnings, Hopeful Futures," is far from reality in such scenarios.

The relevance of addressing this issue today cannot be overstated. Conflict destroys hospitals, disrupts medical supply chains, and forces expecting mothers to deliver in dangerous and unhygienic conditions leading to rising maternal and infant mortality rates. Reports from waraffected regions highlight the urgent need for global intervention to protect these women and their babies. While humanitarian organizations are making efforts, the international community must do more to ensure that pregnancy does not become a death sentence for women caught in war.

#### The Harsh Reality:

When hospitals are bombed or forced to shut down, expectant mothers are left with no choice but to give birth in makeshift shelters, refugee camps, or even amidst the rubble of their homes. Many undergo cesarean sections without anesthesia due to shortages of medical supplies, while others die from preventable complications such as excessive bleeding, infections or high blood pressure. Malnutrition further compounds the crisis. With food shortages and limited access to prenatal vitamins, many pregnant women suffer from severe deficiencies that lead to low birth weights, developmental issues and increased risks of maternal mortality. Without adequate nutrition, many struggle to produce enough milk to nourish their newborns. The lack of clean water and sanitation exposes both mother and child to deadly infections.

Beyond physical suffering, the psychological impact of war is profound. Many pregnant women experience extreme stress, anxiety, and depression, which increases the likelihood of complications such as preterm labor and miscarriage. The constant fear of losing loved ones, displacement, and the uncertainty of survival take an immeasurable toll on their mental health. While the challenges facing pregnant women in conflict zones are immense, there are concrete ways the global community can step in to provide support.

#### Supporting Humanitarian Organizations

Humanitarian organizations play a crucial role in safeguarding pregnant women in war zones by providing emergency medical care, nutrition, and essential supplies. Let's take a look at some of these organizations and at various ways of supporting the work they do.





Doctors Without Borders (MSF) is one of the leading organizations offering maternal healthcare in conflict zones. Their emergency obstetric services, including C-sections and skilled birth assistance helps reduce maternal mortality. MSF also deploys mobile clinics to reach displaced populations and provides trauma care for women affected by war-related violence. Their presence in conflict-affected areas ensures that pregnant women receive critical medical attention despite the destruction of healthcare facilities.



**UNICEF midwifery & obstetric kits** One of UNICEF's most significant contributions is the midwifery kit, which has become a life-saving tool for pregnant women in emergency situations worldwide. These kits, which include essential medical supplies, support up to 50 deliveries and are used by trained healthcare workers especially in crucial areas where health facilities are often underequipped and distant from the communities they serve.

Many women in such regions are forced to travel long distances to find a better-equipped facility, putting their health and the health of their babies at risk. However, with the provision of these midwifery kits, women can give birth in their local hospitals. UNICEF's efforts in equipping local hospitals reduce risks and improve maternal and neonatal care in emergencies.

The International Red Cross (ICRC) Field hospitals are essential in providing emergency medical care in conflict zones, where existing healthcare infrastructure is often destroyed or overwhelmed. The 60-bed field hospital set up by the ICRC in Gaza is a crucial part of the response to the region's pressing health needs. It offers emergency surgical care, obstetric and gynecological services, and maternal and newborn care, ensuring that women and children can receive essential medical attention in an area with limited resources. The hospital also provides pediatric care, mass casualty management, and triage capacities, addressing both routine and urgent medical needs. By supporting local organisations' efforts, these field hospitals play a vital role in delivering life-saving care in war-affected regions.







The United Nations Population Fund (UNFPA) prioritizes reproductive health in crisis zones by addressing critical shortages in reproductive health supplies for pregnant women and new mothers. ensuring essential items are restocked to prevent complications. The organization also activates its network of midwives, who provide on-the-ground support while staying connected to hospital-level specialists for complex cases. Additionally, **UNFPA** supports **hotlines** offering information, guidance, and counseling services to women and youth, helping them navigate the challenges of childbirth and maternal health during crises. Through these efforts, UNFPA ensures that women and newborns continue to receive vital care even in the most difficult situations.

Supporting maternal healthcare in crisis zones is not only a moral responsibility but also an opportunity to make a lasting difference. Donations play a vital role by providing essential medical supplies and care for pregnant women and newborns in urgent need. Advocacy is key to raising awareness and pushing for policy changes that urge governments and international bodies to prioritize maternal healthcare in conflict areas. Volunteering also strengthens the efforts of these organizations by offering hands-on support.

While emergency aid plays a vital role in providing immediate relief, long-term **solutions** are essential to address the ongoing challenges faced by pregnant women and newborns in conflict zones. The focus must shift towards rebuilding healthcare systems that are sustainable and resilient, capable of withstanding the pressures of war and crisis. Governments and **international organizations** must prioritize the **training and deployment** of midwives and doctors, ensuring that communities have access to qualified healthcare professionals, even in the most remote or war-torn areas. Policies that protect expectant mothers and children during conflict must be strengthened and enforced. These policies should include safeguarding access reproductive to healthcare, ensuring the supply of medical resources and facilitating safe birthing conditions. By investing in these long-term solutions, we can create an environment where maternal health is prioritized even in the midst of crisis, significantly reducing the risks faced by women and children and ultimately saving countless lives, bringing to life the theme "Healthy Beginnings, Hopeful Futures"!





For 2025, the WHO focuses on the improvement of maternal and child health and their motto aims on Healthy Beginning and Hopeful futures. Such themes often give us, as healthcare professionals, a gentle nudge on the societal and our own well-being.

As healthcare professionals, in view of taking care of the society we often forget our own health and wellbeing in the process. Though this theme focuses on the Maternal and Child health, let us take a detour and accept another perception of the theme. We as a society envision dramatic overhauls such as grueling gym routines, restrictive diets, societal judgments on beauty – but sustained health isn't about radical shifts or actions. It should be about the quiet power of consistent, powerful yet simple lifestyle changes.

This year, let us embrace the attainable, everyday habits that nurture a healthier, happier YOU. A few tips that can help rejuvenate and help towards a healthy life.

#### 1. Hydration: The Silent Superhero.

Often due to work stress or absence of a water bottle, we forget to drink water and instead prefer to gulp any aerated or caffeinated drinks. Think of hydration through water as the foundation of your well-being. It fuels our energy, aids digestion, helps clear toxins and keeps one's skin glowing. Instead of aiming for a daunting gallon, start small:

- **Morning Ritual:** Begin the day with a glass of water before anything else.
- **Visual Reminders:** Keep a water bottle visible on your desk or in your bag.
- Flavor Infusions: Add slices of lemon, cucumber, or berries for a refreshing twist.

#### 2. Mindful Movement: Embrace it Everyday.

Exercise doesn't have to mean marathon training or lifting weights in the gym for an hour. It's about integrating movement into daily life.

• **The 10-Minute Rule:** Even 10 minutes of brisk walking, stretching, or dancing can make a difference.

- Active Commuting: Walk or cycle short distances instead of driving.
- **Desk Breaks:** Set reminders to stand up, stretch, or do simple exercises every hour.

**Find joy in movement:** Gardening, dancing, playing with pets, all count as beneficial movement.

#### 3. Nourishing Our Plate: The Power of Color.

Dietary changes don't have to be about deprivation or restricting to any fancy food items or eating limited food. Focus on adding, not subtracting.

- **Rainbow Eating:** Aim for a variety of colorful fruits and vegetables daily. Each color provides different nutrients.
- Whole Food Focus: Prioritize whole, unprocessed foods over refined options.
- **Mindful Eating:** Pay attention to body's hunger cues and savor your meals. Avoid eating while distracted.
- **Reduce processed sugars:** Swap sugary drinks for water or herbal tea.
- Consider eating in moderate intervals.



## 4. Digital Detox: Finding Balance in a Connected World.

Our digital lives can be overwhelming. This World Health Day, reclaim mental space.

- **Screen-Free Zones:** Designate areas in home as screen-free zones, especially the bedroom.
- Set Time Limits: Use app timers to limit social media and screen time.
- **Mindful Moments:** Schedule short periods of quiet reflection or meditation.
- **Reconnect with nature:** Take time away from screens and enjoy outdoor activities.
- **Relax your eyes:** Look away from your Laptop / System screen every 40 minutes for atleast 30 seconds and look at a far away distance (preferable if it is greenery)

#### 5. Prioritize Sleep: The Body's Reset Button.

Quality sleep is non-negotiable for optimal health.

- **Consistent Sleep Schedule:** Aim for the same bedtime and wake-up time, even on weekends.
- **Create a Relaxing Bedtime Routine:** Wind down with a warm bath, reading, or gentle stretching.
- **Optimize Sleep Environment:** Ensure the bedroom is dark, quiet, and cool.
- Avoid caffeine and alcohol before bed.

#### 6. Cultivate Connection: Nurture Relationships.

Social connections are vital for mental and emotional well-being.

- Make Time for Loved Ones: Schedule regular catch-ups with friends and family.
- Join a Community: Engage in activities that connect you with like-minded individuals.
- **Practice Gratitude:** Express appreciation for the people in your life.
- **Be present:** When spending time with loved ones, put away electronic devices, and truly listen.

With all these simple tricks under your sleeve, one can make life simple and healthy. This will not only nourish one's health but also improve the relations one keeps with others. It is of utmost importance for all to at least follow a few steps and enjoy the life we have received as a gift. This World Health Day, let us prioritize our health and encourage others to follow. Remember, Talking is Easy but to Set an Example – **YOU** have to be the Example.



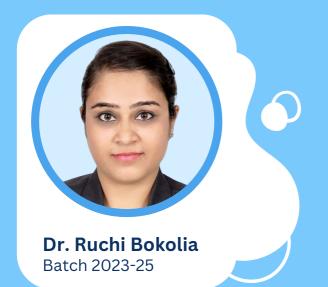




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# CO-CURRICULAR ACTIVITIES





## THE IMPACT OF SOCIAL MEDIA ON HEALTH BEHAVIOR AND AWARENESS

In the digital era, social media platforms like Instagram, Facebook, YouTube, and Google Blogs have emerged as powerful tools in shaping health behavior and awareness. With billions of active users, these platforms play a role disseminating health pivotal in information, influencing lifestyle choices, and fostering public engagement in health discussions.

One of the most significant contributions of social media to healthcare is the accessibility of information. Health organizations, professionals, and influencers use these platforms to share credible information on various health topics, including disease prevention, mental health awareness, and fitness regimes. Campaigns promoting vaccination, healthy eating habits, and preventive screenings have successfully reached millions, leading to informed decisionmaking among users.

However, the impact is not entirely positive. The proliferation of misinformation and unverified health claims remain a major concern. Many individuals rely on social media for medical advice without consulting professionals, which can lead to self-diagnosis, misuse of medications, and adoption of unsafe health practices. The spread of anti-vaccine narratives and fad diets illustrates the dangers of unchecked content. Despite these challenges, social media remains a transformative force in healthcare communication. Governments and healthcare organizations must implement stringent regulations to combat misinformation while leveraging these platforms for public health campaigns. Encouraging media literacy among users is also crucial in distinguishing credible sources from unreliable ones.



As social media continues to evolve, its role in health awareness and behavior modification will only expand. By harnessing its potential responsibly, we can enhance public health outcomes and empower individuals with accurate, evidence-based information. The key lies in striking a balance between accessibility and authenticity, ensuring that the digital health revolution is both informative and safe for all users.



## REIMAGINING CRITICAL CARE: THE HIDDEN CHALLENGES OF TELE-ICU MANAGEMENT

#### A Digital Lifeline Under Strain

In a healthcare world that's rapidly digitizing, Tele-ICU stands as one of the most radical shifts in critical care delivery. Through Digitalization, ICU no longer is bound by walls, and intensivists monitor patients from hundreds of kilometers away, aided by cameras, monitors, and a web of data. This is not a science fiction-it is the present reality, particularly in countries like India where critical care resources are overstretched and unevenly distributed. Hospitals are now investing in high end technological advancements such as bed alerting systems, where the vitals and other critical aspects are monitored through the bed and no longer require wires being attached to the patient. In cases where all critical alerts are directly communicated to the primary doctor and critical care doctors on their mobiles which reduces the steps in the manual critical value alerting process. Many of such critical processes are reduced and streamlined through the assistance of the Tele-ICU care.

Though implementations of Tele-ICUs have been initiated and have increased efficiency and optimization, scope for improvement is still there as the concept is at its budding phase. This technology majorly is easier to be adopted by newer hospitals or by hospitals receiving new funding, but it will still take some time for the other hospitals to catch up to this process. The challenges faced towards implementation of this comprehensive and complex management system is further elaborated. Technological fragmentation is one of the major challenges in Tele-ICU operations. Integration of monitors, ventilators, laboratory equipment, electronic medical records, Hospital Information System and Tele-ICU software is essential to eliminate the risk associated with delay in care intervention.

A skilled Tele-ICU doctor may detect early signs of sepsis via data trends, but they depend on a bedside nurse to act on their advice. This interdependence between the bedside team and remote clinical team necessitates trust and coordination between teams. Culture of shared responsibility and effective communication can overcome risk of error, provide timely care and perform any complex tasks required. Hospitals can succeed in Tele-ICU integration where soft skills as well as technical trainings are prioritised equally.

The success of Tele-ICU in rural and remote areas is highly dependent on reliable internet, contemporary and upgraded technology and equipment, and trained staff. This demand and supply are to be met effectively as Tele-ICU is often the sole form of specialist input.

Ethical concerns and legal issues emerge related to end-of-life care, clear division of responsibilities of various aspects of care designing, monitoring and delivery. There is definitely a requirement of a legal framework defining the responsibilities and risk allocation between the bed-side and remote care teams. Practice of transparency and accountability can address the issues around ethical concern.





#### The Unfinished Revolution

Tele-ICU is a tool—a powerful one—that requires systems thinking, human empathy, and technological finesse to function effectively. Policymakers are required to go beyond funding and create standards for training, legal clarity, tech infrastructure, and emotional support. What lies ahead is not just a roadmap for solving operational problems—it is an opportunity to redefine what intensive care means in the 21st century. If done right, Tele-ICU can be more than a remote monitoring service; it can become the nerve center of equitable critical care.



The roots of modern quality management can be traced back to the early 20th century, with key milestones including the development of statistical quality control methods by Walter Shewhart in the 1920s and the work of W. Edwards Deming and Joseph Juran in the mid-20th century, which laid the foundation for Total Quality Management (TQM). Exceptionally speaking about the Quality Management System in the healthcare industry, a structured and formalised approach was introduced in the 1960s and 1970s.

#### The Role of Quality Management in Modern Healthcare

Due to the fast-paced changes and better practices implemented in the healthcare industry including the technological dependency, it majorly revolves around providing the customers with higher patient expectations, and more complex and patient specific requirements. Quality management ensures safe, efficient, and patient-centred care, helping hospitals uphold high standards, reduce errors, and improve outcomes. But, to cater to all these complex, highly demanding expectations of the current customers, it often becomes an operational challenge towards maintaining Quality. On the contrary, 'Quality' provided is not limited to just KPIs and audits but revolves more around the quality of services you shown and provided to the patients.

This article highlights the importance of accreditation, continuous improvement, and data-driven decisions in modern healthcare. By looking at global best practices and regional challenges, we emphasize the need for a strong quality framework for healthcare's future.





#### a

Over the past few decades, Healthcare has shifted from a treatment-focused model to a quality-driven, patient-centred approach, influenced by:

- Increased chronic diseases requiring standardized, evidence-based care and increased clinical audits
- Globalization, with patients expecting world-class standards.
- Technological and data advancements to enhance efficiency and patient outcomes.
- Regulatory mandates and accreditation frameworks like NABH (Southern Asian Countries), JCI (Global), and ISO (Global).

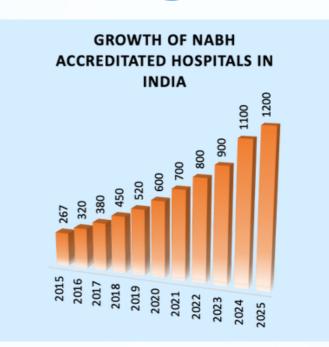
## Hospital Accreditations: A Formulation for Continual Quality Improvement

Accreditation ensures hospitals meet global safety and quality standards. Globally recognized accreditation bodies include:

- Joint Commission International (JCI) Ensures international standards for patient safety and hospital management, with 45 accredited hospitals in India
- National Accreditation Board for Hospitals & Healthcare Providers (NABH – South Asian Countries) – Promotes quality and patient safety in Indian hospitals, over 1,200 hospitals have obtained NABH accreditation
- International Organization for Standardization (ISO 9001:2015) Focuses on process efficiency in healthcare settings.

#### **Benefits of Accreditation:**

- **Trust & Safety:** Ensures high standards, reduces errors, and builds patient trust.
- Efficiency & Better Outcomes: Streamlines workflows, improves patient care, and reduces mortality and readmissions.
- Global Credibility & Financial Growth: Enhances reputation, attracts international patients, and increases reimbursements.



- **Employee Satisfaction:** Fosters a positive work culture, boosting morale and retention.
- **Regulatory Compliance & Best Practices:** Ensures adherence to standards and provides access to global networks for continuous improvement.

## Need for Strengthening Quality Management in Healthcare

Growth is attributed to increased healthcare spending, expansion of hospital networks, and advancements in medical technology. To bridge the gaps in quality management, hospitals and policymakers must focus on:

- Making accreditation mandatory to ensure standardized quality across all hospitals.
- Investing in digital health infrastructure Expanding EHR adoption, seamless data exchange, improving care coordination
- Staff training Building expertise in quality management.
- Promoting continuous improvement Encouraging a culture of ongoing quality enhancement.
- Enhancing regulatory oversight Implementing stricter compliance measures for patient safety.



#### **Challenges in Achieving Accreditation**

- High costs of infrastructure upgrades, staff training, and documentation, making it difficult for mid-sized hospitals
- Resistance to change from hospital staff due to additional procedural burdens.
- Data management issues with many hospitals lacking integrated digital health systems for compliance tracking.
- Lack of data analytics Inconsistent tracking on missed improvement opportunities.
- Slow regulatory adoption, Government policies on mandatory accreditation, slowing adoption rates across the industry.

Addressing these issues is essential for India to build a healthcare system that meets global standards while ensuring patient safety and satisfaction.

## Current Healthcare Infrastructural Developments in India:

- 1. **National Health Mission:** Enhanced medical supply availability and community healthcare participation.
- 2. **Ayushman Bharat:** By 2025, over 150,000 Health and Wellness Centers (HWCs) to improve primary healthcare access nationwide.
- 3. **Pradhan Mantri Jan Arogya Yojana** (PM-JAY): ₹5 lakh annual coverage per family for hospitalization.
- 4.**Tele-ICU:** Aims to connect rural hospitals to major medical centers through telemedicine.
- 5. **Healthcare Professional Demand:** The demand for Indian healthcare professionals is expected to double, both nationally and globally, by 2030.
- 6. Workforce Shortage: Only 1.7 nurses per 1,000 people and a 1:1 doctor-patient ratio.
- 7. **Private Hospital Expansion:** Private hospitals are projected to add over 4,000 beds by 2025-26, with an investment of ₹11,500 crores, signaling strong growth and expansion in the sector.

## Why Quality Management is the Future of Healthcare?

India's healthcare sector has made great strides, especially with the rise of private hospitals. To stay competitive, hospitals must prioritize safe, efficient, and standardized care. Accreditation, continuous improvement, and data-driven decisions are essential for a patient-centered system.

By adopting global best practices, India can improve outcomes, enhance safety, and ensure sustainable growth. Investing in quality now will shape the future of healthcare for generations.

The future of healthcare hinges on a strong sustainability, foundation of quality, and regulatory excellence. As patient expectations rise and medical advancements accelerate, hospitals must evolve beyond traditional care models. A well-structured quality management system not only enhances patient safety but also drives operational efficiency and global credibility. Sustainability in healthcare is no longer an option-it is a necessity to optimize environmental resources and ensure responsibility. In recent times, the trust and adoption of electronic measures / digitalisation is on a rise in the healthcare industry. For key operational and quality based frameworks, softwares has been implemented across the country. Quality Audits have been digitally recorded through which key indicators for hospital safety are monitored and raw data can be easily maintained. Reporting of any errors and auditing becomes an easy task for the hospital staff and if necessary, confidentiality is also maintained. Verification and validation of the data becomes easier and accessible for the departments and corrective preventive actions can be immediately implemented. Meanwhile, regulatory compliance safeguards trust and ethical standards in patient care and has initiated towards submission of any type of request in a digital format and which gets validated during their visits. By embracing digital transformation, global best practices, and a culture of continuous improvement, we can build a resilient, future-ready healthcare system that patient well-being prioritizes both and institutional growth.

Let's build a healthier tomorrow, today!



Dr. Tanmoy Ghosh Batch 2023- 25 Improving the Discharge Turnaround Time at Kauvery Hospital Through Identification of Possible Improvement Strategies



Ms. Ria Chhibber Batch 2023- 25

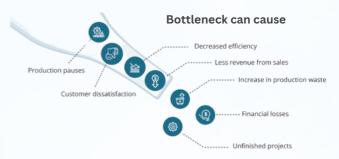
#### Overview

During our internship at Kauvery Hospital, Bangalore, our project focused on a critical process followed at the hospital in the operations department: Streamlining and Analysing the Discharge Turnaround Time (TAT). The discharge process is a key determinant of hospital efficiency, patient satisfaction, and bed availability. A better and reduced Discharge Process benefits the organisation by directly contributing to its increased revenue, decrease in revenue leakages, better patient satisfaction, better turnaround rate, increase in bed occupancy rates and streamlined processes. The objective of the internship was to analyse the root causes of the delays in the discharge process and to propose any viable and implementable solutions for improvement.

#### **Problem Statement**

On observation of the discharge process, the following obstacles were identified:

- Increased patient waiting times: Delays in finalizing discharge formalities led to extended hospital stays for patients who were medically fit for discharge.
- Reduced bed turnover affecting new admissions: Delayed Discharges in few cases lead to unavailability of beds for incoming patients, causing admission bottlenecks.
- Administrative bottlenecks: Billing finalizations, insurance approvals, and medical documentation required multiple levels of approval, causing unnecessary delays.



## Proposed Solutions for Discharge Turnaround Improvement

- Standardization of Discharge Protocols: Implementing and prioritising planned discharges among the total list of discharges increases the patient satisfaction for those availing a planned admission and discharges. A structured discharge checklist was proposed to ensure that all necessary steps were completed systematically, reducing redundant tasks and errors.
- **Process Automation:** Recommending regular meetings with key stakeholders to understand and analyse the monthly / half monthly discharge turnaround time and to implement strategies regularly to decrease the patient dissatisfaction.
- Dedicated Discharge Coordinator: Introduced the concept of a discharge facilitator responsible for overseeing the entire discharge process, ensuring efficient coordination between teams and minimizing communication delays.
- **Continual Patient Education:** Ensuring patients and caregivers were briefed about pre-discharge formalities a day before the discharge to prevent last-minute delays. This included early initiation of billing and insurance paperwork where applicable.



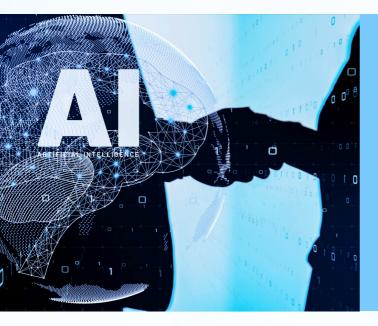


#### Key Learnings from the Project

- **Process Bottlenecks:** A detailed analysis helped reveal the discharge process involved multiple stages, including clearance from the treating physician, finance department, pharmacy, and nursing staff, all of which operated in silos.
- Interdepartmental Communication: Alignment between different hospital departments often resulted in reducing the time of discharge, with patients and their families leaving with satisfaction after a smooth final clearance, with constant communication with the hospital team.
- **Technology Usage:** The internship benefitted in understanding the cruciality of a comprehensive Hospital Information System in place to track, help in documentation and reducing the bottlenecks in the Discharge process.

#### **Conclusion & Recommendations**

The internship at **Kauvery** Hospital provided valuable insights into hospital operations, particularly in addressing discharge inefficiencies. The learnings from this project demonstrated the importance of structured process improvement, technology-driven interventions, and effective teamwork in optimizing healthcare delivery. We extend our gratitude to **Kauvery** Hospital, Bangalore, for this invaluable opportunity. Special thanks to our mentors, faculty, and hospital staff for their support in making this internship a transformative learning experience.



## AI IN HEALTHCARE: TRANSFORMING PATIENT CARE AND HOSPITAL EFFICIENCY

In the 21st Century, development in the field of Artificial Intelligence (AI) is of utmost commemoration. AI is currently used in the Healthcare Industry in various forms such as Robotic Surgery, Laparoscopic Surgeries, PACS Systems, Diagnostics & Imaging Testing, Rapid Testing for Sterility, Data Analytics etc.

The students of ISBR attended the seminar **"AI & Digital Transformation in Care Delivery"** hosted by Indian School of Business (ISB), Hyderabad at Hyatt Centric, Bangalore on February 21, 2025. The seminar gave an insight towards the role of AI in Medicine - transforming healthcare by improving diagnostics, streamlining hospital operations, and advancing public health strategies.







The seminar featured three distinguished speakers—Mr Shashi Bhushan, Founder & CEO - GTM4Health, who shed light on AI-driven diagnostics and disease prediction; Mr P. Padmanabhan, Founder, IndyGen Ai, Appnomic Systems, who explored how AI-powered hospital assistants are revolutionizing clinical workflows; and Dr. Bhaskar Rajakumar, Program Director, ARTPARK, who painted a compelling picture of AI's future in public health, digital twins, and drug discovery. This experience not only expanded knowledge of the students on AI's capabilities but also reshaped their perspective on how technology is influencing modern healthcare.

Artificial Intelligence is enhancing diagnostics to improve treatment outcomes. Al-powered tools are making disease detection faster and more accurate, assisting doctors in interpreting medical images with greater precision, and reducing human error. Today, the thought of robotic surgeries and long distant referrals during a live surgery is the truth. What resonated the most was the idea that AI is not a replacement for doctors but a powerful decision-support system. While AI can analyze vast amounts of data in seconds, human expertise remains irreplaceable in making critical medical judgments.

Al is enhancing process efficiency and patient management. Al-powered assistants are improving real-time patient monitoring, medication administration, and engagement. The ability of AI to track vital signs, detect anomalies, and alert medical staff before conditions worsen is remarkable. Ethical concerns, data privacy issues, and the need for human oversight in AI-driven decisions serve as reminders that technology must be integrated responsibly and within proper regulatory frameworks.

Reflecting on this seminar, the students realized AI should be used wisely and ethically, ensuring that human expertise remains at the forefront. This seminar reinforced a powerful message: AI is not just the future of healthcare—it is happening now. The real challenge lies in how we use it to build a smarter, more inclusive, and patient-centered healthcare system.



## **LEARN FROM ALUM**

## Guiding the Next Generation: Orientation on NABH Guidelines



**Ms. Anandita D. Raju** Alumna, Batch 2021- 23 *Quality Executive CARE Hospitals Banjara Hills, Hyderabad* 

In the ever-evolving field of healthcare, understanding quality standards is crucial for budding professionals. Ms. Anandita conducted an insightful orientation session for the Healthcare Management Batch 2023-25 focusing on internship challenges and the importance of NABH guidelines.

Drawing from her experience, Anandita emphasized how NABH accreditation is not just about compliance but about building a culture of excellence. She walked them through key protocols, patient safety measures, and documentation essentials—critical aspects for any intern navigating hospital operations.

With real-life examples and engaging discussions, listeners are not just informed, but inspired —ready to tackle their internships with a strong foundation in quality and patient care.

Healthcare Forward - April 2025







Ms. Meera Michael

#### **BIOGRAPHY:**

Born and raised in the UAE, she completed her schooling in Abu Dhabi and later pursued higher education in India, supported by a family that valued growth and encouragement. She holds a Bachelor of Arts degree with a triple major in Psychology, Sociology, and Economics from Christ University, Bangalore. Her journey into healthcare management was driven by a commitment to impact lives meaningfully, leading her to specialize in Healthcare Management at ISBR Business School.

#### **JOURNEY AT ISBR:**

At ISBR, she found a vibrant community and an environment rich with opportunities to expand her knowledge and skills. From the beginning, she was actively engaged, taking on the role of student co-editor for 'Strategic Management: Tools and Its Application'. A highlight of her journey was securing an internship through a guest lecture, showcasing her networking skills and initiative. Her time at ISBR has been transformative, equipping her for the challenges and responsibilities of a career in healthcare management.

#### **KEY TAKEAWAYS FROM ISBR:**

Looking ahead, she is driven by a vision to make a positive impact within the healthcare sector. Her time at ISBR emphasized the importance of engaging actively with learning opportunities—a takeaway she is eager to carry forward. Her commitment is reflected in managing the academic database and preparing first aid kits, showcasing the practical application of their studies. Equipped with critical thinking and problem-solving abilities honed through workshops, projects, and seminars, she is prepared to contribute meaningfully to patient care and operational efficiency in healthcare institutions.





Ms. Sreesha AP



Ms. Archee Dadhich

#### **BIOGRAPHY:**

This student hails from Chennai, a vibrant city known for its perpetual warmth. After completing her BBA at M.O.P. Vaishnav College, she chose to pursue post graduation in Healthcare Management, driven by a longstanding interest in the field and her family's medical background. The decision to leave Chennai for postgraduate studies marked a significant step outside her comfort zone, one that she is proud of.

#### **JOURNEY AT ISBR:**

The student's experience at ISBR (International School of Business and Research) has been nothing short of transformative. She engaged deeply in practical learning opportunities, gaining insights through internships, live projects, and mentorship-driven workshops. These experiences not only enhanced her academic understanding but also instilled the critical ability to unlearn established concepts while adapting to new environments in Bangalore. She has come to appreciate that the journey of unlearning is equally important as acquiring new knowledge.

#### **KEY TAKEAWAYS FROM ISBR:**

She reflects on her experiences with immense gratitude. She leaves with cherished memories and newfound confidence that equips her to navigate life independently. Committed to personal development, she views this endeavor as a multifaceted process, focusing on skill enhancement, nurturing relationships, and fostering self-awareness. Her active participation in inter-college culturals, winning competitions, live projects, internships, and publications, along with her current role as Senior Executive of International Relations at MGM Healthcare, further enriches her journey and prepares her for the future.

#### **BIOGRAPHY:**

Archee is committed to creating a significant impact in the healthcare sector. In addition to her academic interests, Archee expresses her creativity through dance, where she enjoys the freedom of selfexpression. She is also passionate about travel, which allows her to embrace diverse cultures and experiences, enriching her perspective on life.

#### JOURNEY AT ISBR:

Archee's experience at ISBR has been enriching, marked by a balance of academic challenges and opportunities for personal growth. The academic program's interdisciplinary approach allowed her to see healthcare management from multiple angles, deepening her practical understanding. Her dedication is further demonstrated through active participation in initiatives like the E-city road cleanup, showcasing her commitment to community welfare and environmental sustainability. She has also completed internships at Eternal Heart Hospital, Apex Hospital, and a live project at Prameya Health Centre, gaining valuable hands-on experience in the healthcare field.

#### **KEY TAKEAWAYS FROM ISBR:**

Looking forward, Archee is driven by a commitment to bring positive change to the healthcare sector. During her stay at ISBR she upskilled herself in collaborative group projects and interactive sessions with peers fostered a sense of teamwork and adaptability. In addition she developed few qualities which are also essential traits in the healthcare sector. One standout memory for Archee is her first presentation at ISBR—a moment filled with nerves but also growth. The experience not only honed her public speaking skills but also built a foundational confidence that she carries forward.



## ACHIEVEMENTS & ACCOLADES

#### Ms. Anandita D. Raju

Alumna, Batch 2021-23 Quality Executive, CARE Hospitals Banjara Hills, Hyderabad

#### Championing Surgical Safety: Anandita's Commitment to Quality Care

In the fast-paced world of healthcare, ensuring patient safety is not just a goal—it's a responsibility. Ms. Anandita Raju currently working at CARE Hospitals, Banjara Hills, received the prestigious CARE Champion Award for her outstanding contribution to surgical safety reinforcement.

As a shadow auditor for a Surgical Safety Compliance Reinforcement Project, she played a crucial role in strengthening safety protocols in the operation theatre. Her keen observation led to the identification of a near-miss incident, emphasizing the importance of vigilance in the Surgical Safety Process, a part of the International Patient Safety Goals.

Honored with a "Well Done" card from the VP-Quality & Accreditation and the award certificate from the Late HCOO and Medical Superintendent, Anandita remains deeply grateful for the opportunity to make a tangible impact on patient safety.

Her journey serves as an inspiration—highlighting that every effort in quality improvement contributes to building a safer, more reliable healthcare environment. We wish her many more accolades in future.



CARE
****
CARE
This certificate is proudly presented to
ANANDITA RAJU
for effectively implementing a project on
SURGICAL SAFETY REINFORCEMENT
Mr. Syek Kamran Nusain HCO0 CARE Hospitals, Banjara Mils CARE Hospitals
Date Suly 2023



**Dr. Ruchi Bokolia** Batch 2023-25



#### **Recognition for Exceptional Project Delivery and Compliance**

Dr Ruchi received a notable recognition from both the client and their Infosys Consulting manager for outstanding performance on a recent project. She was awarded the prestigious Insta Award within Infosys Consulting for completing an 8-month project in just 5 months, all while ensuring 100% compliance. This achievement underscores her exceptional efficiency, dedication, passion, leadership and ability to deliver high-quality results ahead of schedule.

# ARCHIVES



Investing in maternal and newborn health

leads to economic progress and healthier, stronger societies

There are global targets to help countries improve maternal and newborn survival



#### **Women need quality** healthcare before, during and after pregnancy and childbirth

#### **Every** 7 seconds, a woman or newborn

World Health 75

dies, or a baby is lost to stillbirth

> Most of these deaths are preventable with quality healthcare before, during and after childbirth

World Health 75 HEALTH

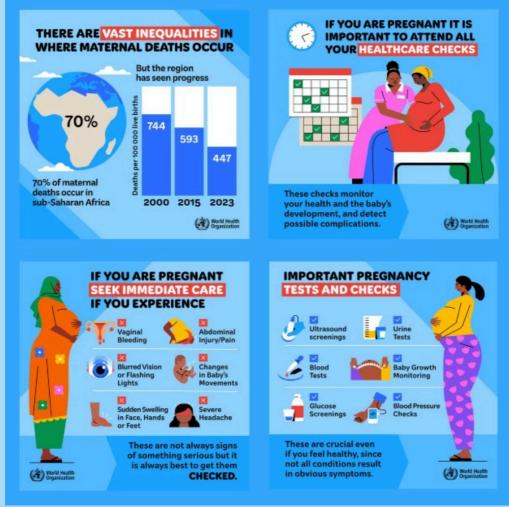


SUSTAINABLE DEVELOPMENT

#HealthForAll

# *Health* is a human right





## About ISBR Business School

ISBR is an institute with International Education Standards with its first campus set up under the aegis of Bangalore Education Trust established in the year 1990. The institute carries a legacy of 35 years in the education sector.

The academic architecture at ISBR is designed to provide students with a unique and holistic learning experience. It combines student ambassadors, club activities , specialized programs, in-depth projects, case studies, research opportunities, and publications to nurture a passion for knowledge and a love of learning. This approach, coupled with excellent placement services and continuous support for individual development, equips ISBR students with a real world learning experience.

A cornerstone of ISBR's success is its faculty members. The institution boasts an esteemed faculty with a rich blend of academic prowess and industry experience and have strong national and international collaborations and stand industry partnerships which as testament to ISBR's dedication to bridging the gap between academia and the Industry. These alliances serve as a testament to ISBR's determination to bridge the gap between theoretical knowledge and practical application. These partnerships will undoubtedly provide valuable opportunities for students and faculty to engage in cross-cultural learning experiences and gain insights into the dynamic world of entrepreneurship, further enhancing ISBR's standing as a premier educational institution.

ISBR offers world-class infrastructure. Our technology enabled classrooms, well-equipped libraries, modern laboratories, and student friendly campus with nearby hostel facilities, offer every ISBRian a wholesome learning experience. We are at the forefront of fostering entrepreneurship culture in the country with numerous IIC activities. ISBR Business School has a strong alumni network with presence all over India and abroad who frequently engage with us.

ISBR's journey to becoming one of the best management colleges in South India for international programs, as recognized by the Centre for Education Growth and Research (CEGR) in 2023, has been marked by consistent dedication to quality education. ISBR has also received the Award of the Best Industry-Linked Management Institute in India by the All India for Technical Education (AICTE) Council Confederation of Indian Industry (CII) Survey every year since 2016. ISBR has successfully completed the NBA 2nd cycle re-accreditation and achieved Grade 2 level autonomy, signifying our commitment to academic excellence.

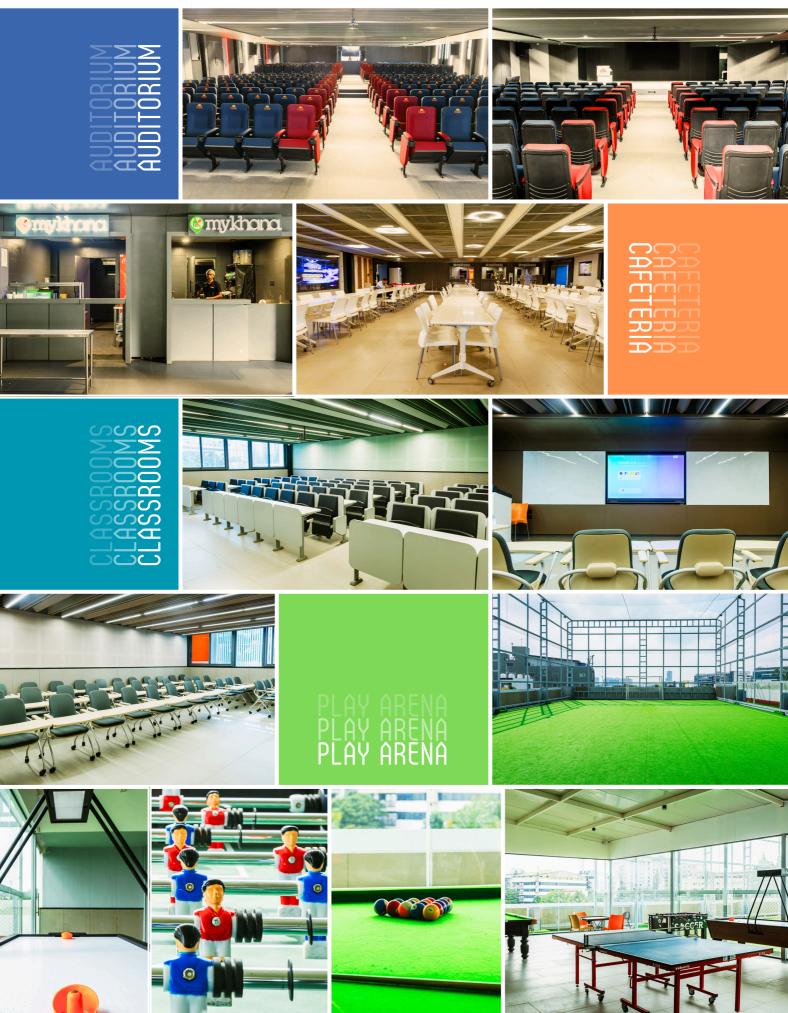


#### **Awards & Rankings**

- Platinum Institute (Top 3% of Management Colleges in India) AICTE-CII Survey, consecutively every year from 2016.
- Ranked among Top 1% B-School Brands of India - Business Barons.
- Accredited by National Board of Accreditation (NBA).
- Level 2 Autonomy by AICTE.
- Awarded Best Business School of the Year Public Relations Council of India (PRCI).
- Ranked No.1 under New Generation B-Schools of India - DM B-School Survey.
- Ranked in India's Best B-School Category for 5 Consecutive Years - Dalal Street Journal.
- Ranked 10th Best in Industry Interaction Silicon India Survey.
- Ranked as 12th Best in South India Bhaskar Lakshya, Dainik Bhaskar Group.
- Ranked 6th Best in Placements: Go-Getter B-School Placements Survey.
- India's Top 29th Institute Silicon India Survey.
- Voted Grand Jury Award in the Categories of (a) Quality of Campus Life and (b) Student Diversity by Education World India Private Higher Education Awards 2019-20.
- Awarded Business Excellence Bharti Group.
- Awarded Exemplary Placement Award Discovery Education.
- Awarded National Championship for Entrepreneur Activities - National Entrepreneur Network (NEN).
- Awarded Centurion Award Centum Learning Centre.
- Awarded Management College of the year in Global Exposure Higher Education Reviewer.



## **REAL WORLD. REAL LEARNING.**











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