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Gestational Diabetes Mellitus: An Expanding Maternal and Intergenerational Public Health Challenge

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Abstract: Background: Gestational diabetes mellitus (GDM) is hyperglycaemia first recognized during pregnancy that does not meet diagnostic criteria for overt diabetes. Its frequency is increasing with rising maternal age, obesity, sedentary lifestyles and population susceptibility to type 2 diabetes. GDM is associated with hypertensive disorders, operative delivery, fetal overgrowth, birth trauma and neonatal metabolic complications, while also identifying women and offspring at increased long-term cardiometabolic risk. **Objective:** This narrative review critically examines the epidemiology, pathophysiology, diagnosis, management and long-term implications of GDM, with emphasis on recent evidence and the Indian public health context. **Key findings:** Approximately one in six live births globally is affected by GDM, although estimates vary substantially with population characteristics and diagnostic criteria. Treatment of GDM diagnosed at 24–28 weeks reduces fetal overgrowth, shoulder dystocia and pregnancy-related hypertension. Recent randomized evidence suggests a modest neonatal benefit from treating GDM detected before 20 weeks among high-risk women, but uncertainty persists regarding early-pregnancy thresholds, overdiagnosis and possible overtreatment. Insulin remains the preferred pharmacological treatment when lifestyle measures are inadequate; metformin is increasingly used but crosses the placenta, and long-term offspring safety remains incompletely established. Postpartum follow-up is a major implementation gap despite the markedly increased risk of type 2 diabetes following GDM. India has adopted universal screening using a pragmatic single-step non-fasting 75-g oral glucose tolerance test, but variations in laboratory capacity, follow-up and continuity of care limit implementation.**Conclusion:** GDM should be viewed not as a transient obstetric disorder but as an early marker of cardiometabolic vulnerability affecting two generations. Universal access to context-appropriate screening, individualized treatment, postpartum diabetes prevention and integration of maternal and noncommunicable disease services are essential.

Keywords: Gestational diabetes mellitus; hyperglycaemia in pregnancy; pregnancy outcomes; type 2 diabetes; postpartum care; India

INTRODUCTION

Gestational diabetes mellitus is one of the most common medical complications of pregnancy. It is conventionally defined as hyperglycaemia first detected during pregnancy that is below the threshold for diabetes mellitus in pregnancy.[1,2] This distinction matters because overt diabetes diagnosed during pregnancy usually reflects previously unrecognized type 1 or type 2 diabetes and carries greater risks of congenital anomalies, miscarriage and maternal microvascular complications.

The global burden is substantial. International Diabetes Federation estimates for 2024 indicate that approximately 15.6% of live births were affected by GDM, equivalent to roughly one in six births. The estimated prevalence was 24.9% in South-East Asia and 26.1% in India, although modelled estimates are highly sensitive to the diagnostic criteria and source data used. WHO reported in 2025 that more than 21

million pregnancies annually are affected by diabetes, including pre-existing diabetes and hyperglycaemia first detected in pregnancy.

GDM is often clinically silent. Without systematic screening, many women remain undiagnosed until complications such as excessive fetal growth, polyhydramnios or hypertensive disease become apparent. Conversely, increasingly sensitive diagnostic criteria identify women with relatively mild glucose elevations whose absolute risk may be small. The challenge is therefore to detect clinically meaningful hyperglycaemia without unnecessarily medicalizing pregnancy.

The significance of GDM extends beyond delivery. Pregnancy functions as a metabolic stress test: women who cannot compensate for pregnancy-induced insulin resistance reveal underlying β-cell vulnerability. Following delivery, glucose concentrations often normalize, but the metabolic susceptibility persists. GDM thus provides an important opportunity for prevention of type 2 diabetes and cardiovascular disease in women and potentially obesity and diabetes in their children.

Pathophysiology and Risk Factors

Normal pregnancy is characterized by progressive insulin resistance, particularly during the second and third trimesters. Placental hormones, including human placental lactogen, placental growth hormone, progesterone, oestrogen and cortisol, alter maternal metabolism to increase nutrient availability for the fetus. In most women, pancreatic β cells compensate by increasing insulin secretion. GDM develops when this compensatory response is insufficient.

The disorder is heterogeneous. Some women predominantly have increased insulin resistance associated with obesity, while others have impaired insulin secretion despite normal body mass. Genetic susceptibility, ethnicity, maternal age, adiposity, diet, physical inactivity, sleep disturbance and previous metabolic disease interact with pregnancy-related hormonal changes.

Established risk factors include previous GDM, previous delivery of a large infant, overweight or obesity, family history of diabetes, polycystic ovary syndrome, advanced maternal age and membership of a population with high type 2 diabetes susceptibility. Nevertheless, a substantial proportion of affected women have no recognized risk factor. Risk-based screening therefore misses cases, particularly in populations such as South Asians in whom diabetes develops at younger ages and lower body mass index.

Excess maternal glucose crosses the placenta, whereas maternal insulin does not. Fetal hyperglycaemia stimulates fetal insulin secretion, promoting fat deposition and excessive growth. Hyperinsulinaemia also increases fetal oxygen demand and may contribute to chronic intrauterine hypoxia. After birth, the sudden interruption of maternal glucose supply in the presence of persistent fetal hyperinsulinaemia can produce neonatal hypoglycaemia.

Maternal and Perinatal Consequences

The Hyperglycemia and Adverse Pregnancy Outcome study demonstrated continuous associations between maternal glucose concentrations below overt diabetes thresholds and birth weight above the 90th percentile, primary caesarean delivery, neonatal hypoglycaemia and elevated cord-blood C-peptide.[3] No clear biological threshold separated low from high risk. Diagnostic cut-offs were consequently selected through consensus rather than discovery of a natural disease boundary.

Women with GDM have increased risks of gestational hypertension and pre-eclampsia. Fetal overgrowth increases the likelihood of labour induction, operative delivery, shoulder dystocia and birth injury. Newborns may experience hypoglycaemia, respiratory distress, hyperbilirubinaemia and admission to neonatal care.

These risks are not uniform. They depend on the severity and timing of hyperglycaemia, maternal body mass, gestational weight gain, treatment response and obstetric practice. Obesity independently increases many of the same outcomes, making it difficult to attribute every complication solely to glucose elevation.

Two landmark randomized trials established that treatment of GDM diagnosed in the conventional second-trimester window improves outcomes. The Australian Carbohydrate Intolerance Study in Pregnant Women showed that dietary advice, glucose monitoring and insulin when required reduced serious perinatal complications.[4] The Maternal–Fetal Medicine Units Network trial subsequently found that treating mild GDM reduced fetal overgrowth, shoulder dystocia, caesarean delivery and hypertensive disorders, although it did not significantly reduce its composite primary neonatal outcome.[5]

Screening and Diagnostic Controversies

Universal versus risk-based screening

Universal screening is increasingly preferred in populations with a high prevalence of diabetes and GDM. Risk-based strategies reduce testing but can miss younger or lean women with impaired glucose tolerance. Universal screening may also improve standardization and reduce reliance on incompletely recorded clinical histories.

The optimal strategy remains contested because health systems differ in prevalence, laboratory capacity and ability to manage identified cases. Screening has little value if women cannot obtain counselling, glucose monitoring, medicines or follow-up.

One-step and two-step approaches

The one-step approach generally uses a fasting 75-g oral glucose tolerance test at 24–28 weeks. WHO and the International Association of Diabetes and Pregnancy Study Groups diagnose GDM when one or more values meet or exceed fasting plasma glucose 92 mg/dL, one-hour glucose 180 mg/dL or two-hour glucose 153 mg/dL.[1,2]

The commonly used two-step approach begins with a non-fasting 50-g glucose challenge test. Women exceeding the screening threshold undergo a fasting 100-g oral glucose tolerance test, and diagnosis usually requires at least two abnormal values. The two-step method identifies fewer women but involves an additional visit and may lose participants between tests.

A central controversy is whether broader one-step diagnosis produces benefits proportionate to the increased prevalence. Lower thresholds identify women with milder hyperglycaemia, increasing clinic workload, monitoring, anxiety and intervention. Because glucose-related risk is continuous, no diagnostic system can entirely avoid arbitrary classification.

Early-pregnancy testing

Testing at the first antenatal visit is important for detecting overt diabetes. Whether milder glucose elevations before 20 weeks should be labelled and treated as GDM is less certain. Criteria developed for 24–28 weeks may not be physiologically appropriate earlier in pregnancy.

The Treatment of Booking Gestational Diabetes Mellitus trial randomized 802 high-risk women with GDM diagnosed before 20 weeks to immediate or deferred treatment. An adverse neonatal composite occurred in 24.9% of the immediate-treatment group and 30.5% of controls, an adjusted risk difference of −5.6 percentage points.[6] The benefit was modest, and approximately one-third of women assigned to deferred care no longer met GDM criteria when retested at 24–28 weeks.

These findings support selective early testing in high-risk women but do not justify uncritical application of later-pregnancy thresholds to every pregnant woman. More intensive early treatment may also increase small-for-gestational-age births in some subgroups, emphasizing the need to avoid excessively restrictive diets or glucose targets.

Management During Pregnancy

Medical nutrition therapy and physical activity

Lifestyle management is the foundation of treatment. Nutritional care should provide sufficient energy for pregnancy while moderating postprandial glucose excursions. The objective is not weight loss or complete carbohydrate avoidance. Meals should emphasize minimally processed foods, vegetables, pulses, whole grains, appropriate protein and healthy fats, with carbohydrate distributed across the day.

Uniform meal plans are inappropriate across diverse cultural and socioeconomic settings. Recommendations must account for household food availability, vegetarian diets, nausea, work patterns and local staple foods. Excessive restriction can lead to hunger, ketonaemia, inadequate gestational weight gain and reduced adherence.

Moderate physical activity, such as walking after meals and pregnancy-appropriate resistance exercise, improves insulin sensitivity when no obstetric contraindication exists. Advice should be individualized for women with hypertension, threatened preterm labour or other pregnancy complications.

Glucose monitoring and targets

Self-monitoring usually includes fasting and post-meal glucose measurements. Common targets are fasting glucose below 95 mg/dL, one-hour postprandial glucose below 140 mg/dL or two-hour glucose

Table 1. Major Areas of Gestational Diabetes Care, Evidence and Current Priorities

Domain	Current approach	Principal benefits	Limitations or controversies	Priority action
Screening population	Universal or risk-based screening	Universal screening detects women without traditional risk factors	Greater testing burden and possible overdiagnosis in low-prevalence populations	Adapt strategy to prevalence and ensure capacity to treat identified women
Standard testing period	OGTT at 24–28 weeks	Supported by treatment trials and physiology of rising insulin resistance	Women with overt or early dysglycaemia may be identified late	Test early for overt diabetes in high-risk women; repeat at 24–28 weeks when appropriate
One-step 75-g OGTT	Fasting, one-hour and two-hour thresholds; one abnormal value diagnostic	Single diagnostic visit and high sensitivity	Increases prevalence and service workload; thresholds are consensus based	Use validated laboratory methods and evaluate benefits and resource implications
Two-step testing	50-g screening test followed by 100-g OGTT	Lower diagnostic prevalence and established use in some settings	Requires multiple visits and may miss milder disease	Minimize loss to follow-up and use consistent diagnostic thresholds
Indian single-step test	Non-fasting 75-g glucose with two-hour plasma glucose ≥140 mg/dL	Practical where fasting attendance and repeat visits are difficult	Lower sensitivity for fasting hyperglycaemia; imperfect agreement with WHO/IADPSG criteria	Strengthen quality assurance and compare clinical outcomes across strategies
Medical nutrition therapy	Individualized diet with appropriate energy and nutrient intake	First-line treatment; can achieve targets without medication	Overrestriction may cause ketosis, inadequate gestational gain or anxiety	Provide culturally appropriate counselling rather than generic carbohydrate restriction
Physical activity	Moderate activity when obstetrically safe	Improves insulin sensitivity and may reduce treatment requirement	Adherence and safety vary with pregnancy complications	Encourage individualized walking and resistance activity
Insulin	Preferred medication when lifestyle therapy is inadequate	Does not cross the placenta and permits flexible titration	Cost, injections, monitoring and hypoglycaemia	Ensure affordable insulin, education and safe titration
Metformin	Oral alternative in selected settings	Lower cost, convenience and less maternal weight gain	Crosses placenta; treatment failure may require insulin; long-term offspring evidence incomplete	Use after informed discussion and according to national guidance
Postpartum testing	75-g OGTT approximately 4–12 weeks after delivery	Detects persistent diabetes or prediabetes and enables prevention	Completion is consistently poor	Integrate testing with postnatal and child-immunization visits and establish recall systems
Long-term follow-up	Glycaemic testing every 1–3 years	Early detection and prevention of type 2 diabetes	Care is fragmented between obstetric and general health services	Create lifelong primary-care records and family-centred prevention pathways

below 120 mg/dL, although specific recommendations vary.[7] Treatment decisions should consider patterns over several days rather than isolated measurements.
Continuous glucose monitoring provides detailed information on postprandial excursions and nocturnal glucose. Its established benefit in type 1 diabetes pregnancy cannot automatically be extrapolated to GDM. For most women with diet-controlled GDM, routine continuous monitoring has not yet demonstrated sufficient outcome or cost benefit to replace standard self-monitoring.

Pharmacological therapy
Medication is indicated when lifestyle measures do not consistently achieve glucose targets. Insulin remains the preferred pharmacological therapy in many international guidelines because it does not cross the placenta and can be adjusted to fasting and postprandial patterns.[7]
Metformin is increasingly used because it is oral, inexpensive and associated with less maternal weight gain and less neonatal hypoglycaemia than insulin in some studies. However, it crosses the placenta, and a proportion of women require supplemental insulin. Long-term follow-up studies have not demonstrated a consistent major safety signal, but uncertainty remains regarding childhood adiposity and metabolic programming. Women should therefore be informed of established benefits and unresolved questions.
Glyburide or glibenclamide is less favoured because of associations with neonatal hypoglycaemia and macrosomia in some analyses. Medication choice should not be based solely on convenience; severity of hyperglycaemia, gestational age, maternal preference, cost and follow-up capacity must be considered.

Delivery and Neonatal Care
Well-controlled GDM without complications does not automatically require early delivery or caesarean section. Timing and mode of delivery should reflect glucose control, medication requirement, fetal growth, maternal complications, cervical status and obstetric history.
Ultrasonographic fetal-weight estimation is imprecise, particularly at higher weights. Decisions based solely on estimated macrosomia may increase operative delivery without preventing all cases of shoulder dystocia. Shared decision-making should acknowledge this uncertainty.
Neonatal teams should anticipate hypoglycaemia, particularly after insulin-treated GDM or excessive fetal growth. Early feeding and protocol-based glucose monitoring are important. Breastfeeding should be initiated and supported because it benefits infant nutrition and may improve maternal metabolic health.

Long-Term Maternal and Offspring Risks
GDM is one of the strongest predictors of future type 2 diabetes. A systematic review and meta-analysis found that women with previous GDM had almost a tenfold higher risk of type 2 diabetes than women with normoglycaemic pregnancies.[8] The absolute risk varies with ethnicity, obesity, severity of pregnancy hyperglycaemia, insulin requirement and duration of follow-up.
Women with previous GDM also have increased risks of recurrent GDM, metabolic syndrome and cardiovascular disease. Yet postpartum testing rates remain low because of competing childcare demands, fragmented services, perceived resolution after delivery and lack of reminder systems.
A 75-g OGTT at approximately 4–12 weeks postpartum is preferred because fasting glucose or HbA1c alone may miss dysglycaemia. Women with normal results should undergo repeat testing every one to three years. Lifestyle interventions and, in selected women with prediabetes, metformin can reduce progression to type 2 diabetes.
Offspring exposed to maternal hyperglycaemia have increased risks of childhood adiposity, impaired glucose tolerance and type 2 diabetes. However, genetic susceptibility, shared family environment and maternal obesity make causal attribution difficult. Evidence that GDM treatment during pregnancy prevents long-term offspring obesity remains inconclusive. Claims of inevitable “transgenerational diabetes” should therefore be avoided.

Public Health Significance
GDM lies at the intersection of maternal health and noncommunicable disease prevention. Antenatal screening identifies a young population at high lifetime risk of diabetes, often years before routine adult screening would occur. It also creates an opportunity to improve diet, activity and weight trajectories for the entire family.

The public health benefits of screening depend on the complete care cascade: testing, diagnosis, counselling, glucose monitoring, treatment, safe delivery and postpartum follow-up. Reporting only the proportion screened conceals losses at each subsequent stage.

GDM also has important equity implications. Women in rural and low-income settings may be unable to attend fasting tests, purchase glucose strips, refrigerate insulin or return repeatedly to specialist clinics. A technically ideal protocol that cannot be completed may perform worse than a simpler, supported pathway.

Indian Perspective

India combines high underlying susceptibility to type 2 diabetes with large birth cohorts and substantial variation in antenatal-care access. A recent systematic review of 117 prevalence estimates reported a pooled GDM prevalence of 13%, with a 95% confidence interval of 9–16%. Heterogeneity was extreme, reflecting differences in diagnostic criteria, geography and study populations; most studies were hospital based and had important risks of bias.

The Government of India recommends universal screening, including at first antenatal contact and again at 24–28 weeks when the initial test is negative. The national programme uses a pragmatic single-step test in which 75 g glucose is given regardless of the timing of the last meal and two-hour plasma glucose of at least 140 mg/dL indicates GDM.[9] This approach was designed for settings where requiring fasting attendance or multiple visits could lead to substantial loss to follow-up. The national guideline remains available through the National Health Mission.

The pragmatic advantage is considerable, but the test does not identify isolated fasting hyperglycaemia and does not classify exactly the same women as the fasting WHO/IADPSG OGTT. Comparisons based solely on sensitivity and specificity are insufficient; Indian studies should determine whether competing strategies produce different maternal, neonatal and health-system outcomes.

Implementation requires reliable glucose measurement, trained antenatal personnel, referral pathways, nutrition counselling, insulin availability and postpartum continuity. Point-of-care capillary testing may improve feasibility, but diagnostic thresholds derived from venous plasma should not be applied uncritically to unvalidated devices.

Linking GDM services with Ayushman Arogya Mandirs and population-based NCD programmes could prevent women from disappearing from care after childbirth. Postpartum testing could be coordinated with immunization or postnatal visits, while Accredited Social Health Activists could support reminders and follow-up if accompanied by training and appropriate incentives.

Recent Advances

The most consequential recent evidence concerns early treatment. The 2023 randomized trial indicates that treating selected high-risk women before 20 weeks may modestly reduce adverse neonatal outcomes.[6] However, uncertainty concerning diagnostic thresholds and possible overtreatment means that early screening should focus first on identifying overt diabetes and clinically important dysglycaemia.

Digital tools are increasingly being used for glucose transmission, dietary support and remote review. They may reduce travel and permit rapid insulin adjustment, but evidence of improved clinical outcomes is inconsistent. Digital interventions may also exclude women without smartphones, connectivity, literacy or privacy.

Prediction models using maternal characteristics, biochemical markers and machine learning are under investigation. Most lack external validation and calibration in diverse populations. Their apparent accuracy may exceed their clinical utility, particularly when universal OGTT screening is already feasible.

Research into metabolomic, genetic and placental biomarkers may eventually distinguish GDM subtypes and allow more individualized care. At present, these methods remain research tools rather than replacements for glucose-based diagnosis.

Challenges and Limitations

The absence of internationally uniform diagnostic criteria remains the central challenge. Different thresholds create different prevalence estimates, workloads and treatment populations. Because glucose-associated risk is continuous, no criterion is entirely objective.

Overdiagnosis may increase anxiety, dietary restriction, monitoring and intervention among women at low absolute risk. Underdiagnosis, conversely, leaves preventable complications untreated. Research

should compare patient-important outcomes and cost-effectiveness rather than merely the number of cases detected.

Treatment trials cannot be generalized equally to all diagnostic thresholds or health systems. Many were conducted with intensive monitoring that may be difficult to reproduce in routine low-resource care. Evidence on long-term offspring benefit, optimal postpartum prevention and continuous glucose monitoring remains incomplete.

Postpartum attrition is perhaps the largest practical failure. Obstetric services often discharge women after delivery, while primary-care systems may not record GDM as a lifelong risk factor. This fragmentation wastes a major opportunity for diabetes prevention.

Future Directions

Future research should establish gestational-age-specific criteria for early pregnancy and identify which women benefit most from immediate treatment. Trials should examine long-term maternal and childhood outcomes, not only birth weight and neonatal composites.

Health systems need standardized indicators covering the entire care cascade: proportion tested, diagnosed, counselled, monitored, controlled, pharmacologically treated, safely delivered and retested postpartum. Results should be disaggregated by geography, socioeconomic status and ethnicity.

Postpartum care should be redesigned as an active transition rather than a recommendation. Electronic reminders, combined mother–child appointments, community follow-up and automatic transfer of GDM history into primary-care records are promising strategies.

India requires large, prospective, population-based comparisons of the national non-fasting test and fasting WHO/IADPSG criteria. Studies should assess diagnostic yield, treatment burden, perinatal outcomes, patient acceptability and cost-effectiveness across rural, urban and tribal settings.

Prevention should begin before pregnancy through healthy nutrition, physical activity, appropriate weight management and detection of pre-existing diabetes. Such action must avoid blaming women for metabolic risks shaped by food environments, poverty, urban design and unequal access to preventive care.

CONCLUSION

Gestational diabetes is both an obstetric complication and an early warning of future cardiometabolic disease. Appropriate detection and treatment reduce fetal overgrowth, shoulder dystocia and hypertensive complications, but diagnostic thresholds and early-pregnancy management remain contested.

The most effective response is neither indiscriminate testing without treatment capacity nor narrow concentration on glucose values. Care should combine context-appropriate screening, individualized nutrition, safe physical activity, timely medication, fetal assessment and planned postpartum prevention.

India's universal single-step screening strategy addresses genuine logistical barriers, but its success depends on implementation quality and continuity after delivery. The next phase should integrate GDM with primary care and national NCD prevention rather than allowing it to remain an isolated antenatal diagnosis.

Pregnancy offers a uniquely motivated period for intervention. The public health opportunity is fulfilled only when the diagnosis leads not merely to a safer delivery, but to sustained protection of the mother's long-term health and a healthier metabolic trajectory for the next generation.

REFERENCES

1. World Health Organization. *Diagnostic criteria and classification of hyperglycaemia first detected in pregnancy* [Internet]. Geneva: World Health Organization; 2013 [cited 2026 Aug 6]. Available from: https://www.who.int/publications/i/item/9789241505307
2. World Health Organization. *WHO recommendations on care for women with diabetes during pregnancy* [Internet]. Geneva: World Health Organization; 2025 [cited 2026 Aug 6]. Available from: https://www.who.int/publications/b/81691
3. HAPO Study Cooperative Research Group, Metzger BE, Lowe LP, Dyer AR, Trimble ER, Chaovarindr U, et al. Hyperglycemia and adverse pregnancy outcomes. N Engl J Med. 2008;358(19):1991-2002. doi:10.1056/NEJMoa0707943.

4. Crowther CA, Hiller JE, Moss JR, McPhee AJ, Jeffries WS, Robinson JS; Australian Carbohydrate Intolerance Study in Pregnant Women Trial Group. Effect of treatment of gestational diabetes mellitus on pregnancy outcomes. N Engl J Med. 2005;352(24):2477-2486. doi:10.1056/NEJMoa042973.
5. Landon MB, Spong CY, Thom E, Carpenter MW, Ramin SM, Casey B, et al. A multicenter, randomized trial of treatment for mild gestational diabetes. N Engl J Med. 2009;361(14):1339-1348. doi:10.1056/NEJMoa0902430.
6. Simmons D, Immanuel J, Hague WM, Teede H, Nolan CJ, Peek MJ, et al. Treatment of gestational diabetes mellitus diagnosed early in pregnancy. N Engl J Med. 2023;388(23):2132-2144. doi:10.1056/NEJMoa2214956.
7. American Diabetes Association Professional Practice Committee. 15. Management of diabetes in pregnancy: Standards of Care in Diabetes—2026. Diabetes Care. 2026;49(Suppl 1):S321-S338.
8. Vounzoulaki E, Khunti K, Abner SC, Tan BK, Davies MJ, Gillies CL. Progression to type 2 diabetes in women with a known history of gestational diabetes: systematic review and meta-analysis. BMJ. 2020;369:m1361. doi:10.1136/bmj.m1361.
9. Ministry of Health and Family Welfare, Government of India. *National guidelines for diagnosis and management of gestational diabetes mellitus* [Internet]. New Delhi: Maternal Health Division, Ministry of Health and Family Welfare, Government of India; 2018 [cited 2026 Aug 6]. Available from: https://nhm.gov.in/
10. Damm P, Houshmand-Oeregaard A, Kelstrup L, Lauenborg J, Mathiesen ER, Clausen TD. Gestational diabetes mellitus and long-term consequences for mother and offspring: a view from Denmark. Diabetologia. 2016;59(7):1396-1399. doi:10.1007/s00125-016-3985-5.