**Insights from our study**

|  |  |  |
| --- | --- | --- |
| **KPI** | **Observations** | **Insight** |
| **GDM** | GDM: Count – 74 Percentage – 13.26%  Non-GDM Count-484 Percentage – 86.74% |  |
| **BMI** | GDM patients in the Overweight category are more.  The average BMI for GDM women is higher than the average BMI for non-diagnosed women. | The likelihood of being diagnosed with GDM is higher among women who are categorized as overweight, compared to those in other BMI categories. |
| **Age** | Women over 30 years of age with GDM – 72.97% | Age is a significant risk factor for developing GDM during pregnancy. GDM is more prominent in middle age to older aged women. |
| **Vit.D deficiency** | Around 39.18% of GDM patients have Vit. D deficiency. | There may be a link between Vit. D deficiency and the development of GDM during pregnancy. |
| **Ethnicity** | 79.63% of the women in our data belong to the White race. | There is no obvious diversity regarding ethnicity. |
| **Previous GDM** | The majority of the patients with previous GDM are found in the Obese and Overweight category. | Overweight or obese can develop insulin resistance, which is a key factor in the development of GDM. |
| **Gestational Age at Diagnosis of GDM** | Most of the women got diagnosed during the second trimester. | Early diagnosis and management of GDM are important to reduce the risk of maternal and fetal complications. |
| **BP & Hb** | Women diagnosed with gestational hypertension develop anemia during pregnancy. | Anemia during pregnancy can increase the risk of maternal and fetal complications and therefore, requires timely diagnosis and treatment. |
| **Medications** | 41.89% women take Insulin medication and 21.62% take Metformin. | Mild GDM patients might be treated with Metformin, while patients who cannot control their blood sugar levels with just Metformin might be treated with Insulin. |
| **Maternal & Fetal Outcomes** | The majority of women (36.49%) in the population study had a safe delivery, while the second highest proportion of women (29.73%) underwent cesarean section. Around 17.57% women had an emergency, and 14.86% were induced. | This shows that, if GDM is treated effectively, women will not have any serious complications during delivery. |
|  |  |  |
| **Features** | **Observations** | **Insight** |
| **Creatinine** | GDM patients reflect abnormal creatinine values. | Abnormal creatinine levels in gestational diabetes (GDM) patients may indicate impaired kidney function or damage, which is a known complication of diabetes. It is important to monitor kidney function in GDM patients as kidney damage can lead to long-term complications such as chronic kidney disease. |
| **Maternal Glycemia** | Non-GDM patients with abnormal HbA1c levels fall under the Overweight BMI category, and they all miscarried. | This could indicate a potential link between poor glycemic control and pregnancy loss, even in the absence of GDM diagnosis. |
| **Gestational Age at Delivery** | 68.91% of patients have delivered within 37-40 weeks. 28.37%GDM patients have delivered over 40 weeks. | Risk of certain complications such as stillbirth, fetal distress, and maternal morbidity may increase with advancing gestational age, especially if they cross 40 weeks. |
|  |  |  |
|  | **Important features (factors) affecting GDM** |  |
|  | Systolic Blood Pressure  Diastolic Blood pressure  Glucose  Platelet  Weight  Previous GDM  BMI  HbA1c | These are the factors that we observed influencing GDM in women. By monitoring and keeping these values in check, we can manage GDM without any complications. And early detection and treatment of GDM can prevent complications and assist in reducing the risk of severe health problems. |

**Tableau Visualization Link:**

[GestationalDiabetes\_Analysis | Tableau Public](https://public.tableau.com/app/profile/nirupa.muthumani/viz/GestationalDiabetes_Analysis/Story1?publish=yes)