

Stillbirth

Pregnancy complications



Field of action 3: Reducing the complications of diabetes

Adults

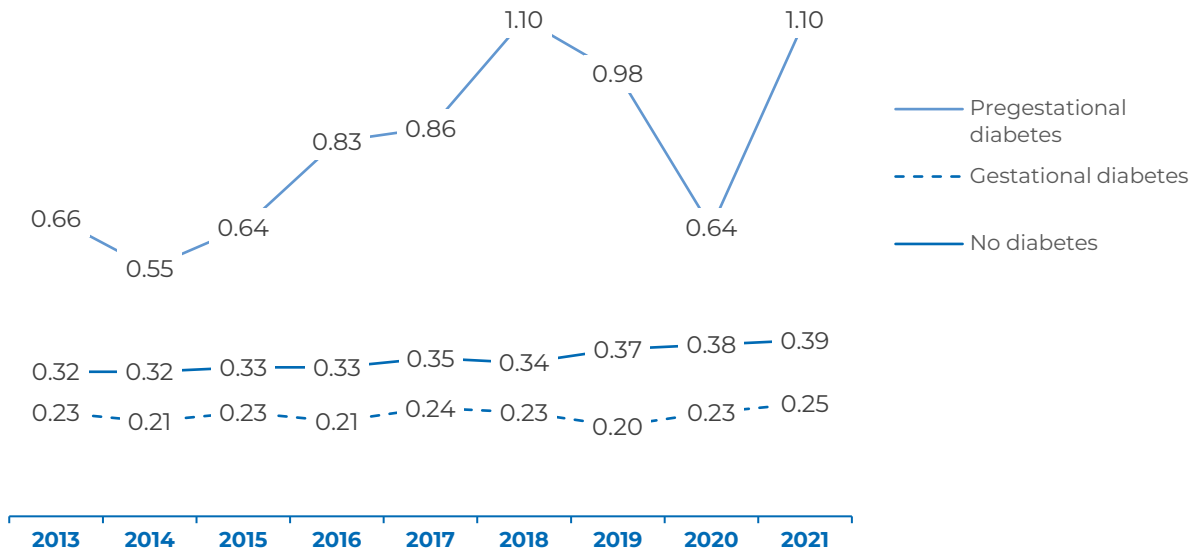
Background

Diabetes mellitus is an important risk factor for complications during pregnancy and at birth. A distinction is made between type 1 or type 2 diabetes that already existed before pregnancy (pregestational diabetes) and diabetes occurring for the first time during pregnancy (gestational diabetes). Both the St. Vincent Declaration [1] and the maternity guideline of the Federal Joint Committee [2] aim to prevent pregnancy complications associated with diabetes. Both gestational diabetes (indicator “prevalence gestational diabetes”) and pregestational diabetes present a risk for complications during pregnancy and birth [3, 4]. This includes an increased risk of stillbirth in the presence of pregestational diabetes [3]. However, an association between stillbirth and gestational diabetes has not been clearly proven [5, 6].

Key facts

- ▶ In 2021, the proportion of stillbirths to singletons is 0.39%.
- ▶ The proportion of stillbirths is higher among women with pregestational diabetes (1.1%) than among women without diabetes (0.39%); however, it is lower among women with gestational diabetes (0.25%).
- ▶ Between 2013 and 2021, the proportion of stillbirths is increasing, especially among women with pregestational diabetes.

Figure 1: Temporal development of the proportion of stillbirths among women with hospital birth of singletons in % by pregestational diabetes, gestational diabetes or no diabetes between 2013 and 2021 (age-standardised).



Results

In 2021, the proportion of stillborn singletons is 0.39%. The proportion is lower among women with gestational diabetes (0.25%) and higher among women with pregestational diabetes (1.1%) than among women without diabetes (0.39%). Over time from 2013 to 2021, the proportion of stillbirths increases among women without diabetes, among women with gestational diabetes, and among women with pregestational diabetes.

Conclusion

Overall, stillbirth is relatively rare, but the proportion increases over time. Among women with pregestational diabetes, the increase is particularly pronounced and is higher than reported by a previous analysis from Bavaria based on the same data [7]. Gestational diabetes, however, is associated with a lower proportion of stillbirth. This could be due to more intensive care for women with gestational diabetes, but also because women may not have received a test for gestational diabetes at the time of stillbirth [8]. The Federal Statistical Office also reports an increasing proportion of stillbirths over recent years [9]. Rising maternal age can explain only a modest portion of the increase. Thus, especially the care of women with pregestational diabetes should be focused on and the temporal development should be closely monitored further.

Methodology and data sources

Definition

The indicator stillbirth is defined as the proportion of women with hospital births in a given year who had a documented stillbirth.

Reference population

All women with inpatient singleton births in Germany.

Data source

Perinatal medicine quality assurance data (domain of obstetrics) at the Institute for Quality and Transparency in Health Care (IQTIG) [10]: since 2015 based on the perinatal statistics provided by the federal states. This source provides data on all of the approximately 700,000 births that occur in German hospitals annually.

Calculation

- ▶ **Observed relative values:** Quotient of the number of women with documented stillbirth and the number of all women with hospital birth.
- ▶ **Stratification:** The analysis distinguishes between women with pregestational diabetes (documented in Catalog A: "Medical History and General Findings/First Screening Examination" in the maternity log), gestational diabetes, and no diabetes.
- ▶ **Age standardisation:** Direct age standardisation is performed using age groups < 25, 25 – 29, 30 – 34, 35 – 39, and ≥ 40 years with the 2021 hospital birth population.

Data quality

The data only contains information on in-hospital birth, as the data is provided by the hospitals. Therefore, data from out-of-hospital births, which represent a very small proportion (less than 2%), are not included. As documentation of gestational diabetes in maternity logs might be incomplete, it is possible that prevalence is being underestimated. Furthermore, no distinction between type 1 and type 2 diabetes is possible in pregestational diabetes.

Data download

Robert Koch Institute. (2024). Results of the National Diabetes Surveillance 2015 – 2024 [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.14935276> (in German)

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External links

- ▶ Reitzle L, Heidemann C, Baumert J, Kaltheuner M, Adamczewski H, Icks A, et al. Pregnancy complications in women with pregestational and gestational diabetes mellitus. *Dtsch Arztebl Int*. 2023;120(6):81-6. <https://doi.org/10.3238/arztebl.m2022.0387>.

Imprint

Editor

Robert Koch Institute · Department of Epidemiology and Health Monitoring
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Citation

National Diabetes Surveillance at the Robert Koch Institute (2024)
Results of the Diabetes-Surveillance 2015 – 2024. Pregnancy complications: Stillbirth –Adults.
Robert Koch-Institute, Berlin. doi: 10.25646/12383.

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Funding

The project Developing National Diabetes Surveillance at the Robert Koch Institute with expansion to an NCD Surveillance (2015 – 2024) was funded by the Federal Ministry of Health (funding references: GE20150323, GE20190305, 2522DIA700, 2523DIA002).

Supported by:



on the basis of a decision
by the German Bundestag