

## Perinatal mortality at the limit of viability in Lombardy Region

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**Objective.** Lombardy has implemented an active perinatal surveillance system to investigate causes of perinatal mortality and identify potential prevention strategies. To enhance care coordination, a network of 11 Hub and 48 Spoke hospitals has been established, with Hub centres specializing in maternal-foetal-medicine.

The periviable period refers to the gestational age range at the threshold of viability, where perinatal survival is possible but often complicated by prematurity.

This investigation aims to explore the incidence and the place of births of cases of perinatal deaths in this period.

**Materials and Methods.** Starting 06/01/2023, Lombardy collects reports of stillbirths and intrapartum deaths from 22 weeks-gestation and neonatal deaths up to 28 days.

Stillbirths, intrapartum deaths and deceased newborns delivered at 22 to 24.6 weeks are considered at the viability limit.

**Results.** From 06/01/2023 to 07/31/2024, there were 293/75,638 (3.87 permille) reported perinatal deaths, 67 (22.9%) during the periviable period (44.8% antepartum, 7.5% intrapartum and 47.8% neonatal deaths).

During the periviable period, mortality rates did not change by gestational age. Neonatal death incidence was 29.2% at 22 weeks-gestation, 59.1% at 23 and 57.1% at 24.

Most of the deaths, 54 (80.6%), occurred in maternal-foetal-medicine centres (44.4% antepartum, 9.3% intrapartum and 46.3% neonatal), equally split among the weeks.

**Conclusions.** In Lombardy, periviable period deaths accounted for 22.9% of total perinatal mortality. Increasing the sample size and conducting a more in-depth analysis, including a review of reports from involved centres, could provide valuable insights into the causes and potential preventability of periviable deaths.