# Perinatal Mortality Rate

## General Considerations

<table>
<thead>
<tr>
<th>Issues</th>
<th>Perinatal diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of indicator</td>
<td>Health outcome</td>
</tr>
<tr>
<td></td>
<td>Can also be used as a measure of action in relation to health policy and health service interventions.</td>
</tr>
<tr>
<td>Rationale</td>
<td>Death during the perinatal stage occurs for many different reasons, but in many cases maternal exposures to environmental hazards are major risk factors. The perinatal mortality rate thus provides a general measure of the health environment during the earliest stages of life.</td>
</tr>
<tr>
<td>Issues in indicator design</td>
<td>This is a well-established indicator, that is already measured and reported in many countries. It relies on routinely collected data, and definitions tend to be widely accepted. Variations in the delineation of the perinatal period do exist in some countries, however, and data quality can be uncertain in more remote areas.</td>
</tr>
</tbody>
</table>

## Specification

### Definition
Rate of stillbirths and deaths during the perinatal period, per 1000 births.

### Terms and concepts
**Perinatal mortality:** death of the child during the period between the 24th week of gestation and the end of the first week of life (including stillbirths).

### Data needs
- Number of deaths in the perinatal period
- Total number of births (including live and still births)

### Data sources, availability and quality
Data on perinatal mortality are usually available from routine health death registration and surveillance systems.

Routine data on the number of live births are available from a number of sources, including vital registrations, sample registration systems, surveillance systems and censuses and demographic surveys (such as the demographic and health surveys of world fertility surveys). Information is also collated by the UN on a regular basis.

In both cases, data are generally of sound quality. In some developing countries, however, registration and surveillance procedures may be incomplete or inconsistent, especially in remote rural areas. In these cases, data may be biased towards the more affluent, urban sectors of the population. Definitions of live births and the perinatal period may also vary between countries.

### Level of spatial aggregation
Administrative district

### Averaging period
Annual

### Computation
The indicator can be computed as a simple percentage, using the total number of births (including stillbirths) as the denominator:

\[
1000 * \frac{(D_{neo} + B_{still})}{(B_{live} + B_{still})}
\]

where:
- \(D_{neo}\) is the number of deaths during the 1st week of life
- \(B_{still}\) is the number of stillbirths
- \(B_{live}\) is the number of live births.

### Units of measurement
Number per 1000 births

### Worked example
Assume that an area has 107,060 live births, 2,930 stillbirths and 668 deaths during the neonatal period (1st week of life). In this case the indicator is
calculated as:

\[
1000 \times \frac{2930 + 668}{107060 + 2930} = 32.7 \text{ per 1000 births}
\]

**Interpretation**

This indicator can be interpreted directly as a measure of risks to children during the gestational and early neonatal period. An increase in perinatal mortality may be taken to imply a deterioration in that environment; a reduction in mortality implies an improvement in the health environment. The range of factors affecting perinatal mortality is, however, large so specific risk factors – or the effects of specific interventions – cannot necessarily be inferred. Problems also exist with the quality of the data in some cases, especially in remote rural areas in developing countries. This can lead to significant bias in the data, towards urban and more affluent sectors of the population.

**Variations and alternatives**

This is a well-established indicator, which is routinely reported in most countries. It can, however, be redefined in slightly different ways if required. In particular, death rates can be assessed for different periods – for example, during the prenatal period only (stillbirths), or during the neonatal period only (neonatal deaths).

**Examples**

WHO *Indicators to monitor maternal health goals*

- **Perinatal mortality rate**

**Useful references**


