Most of infant mortality are neonatal mortality (0-28 days). Most of neonatal mortality are early neonatal death (0-7 days) which is part of perinatal mortality. Perinatal Mortality Rate (PMR) still decreases, but there is more contributions of perinatal mortality to infant mortality. In Puskesmas Candi, IMR has decreased but PMR has not either, the most cause were Low Birth Weight (LBW). Perinatal mortality is influenced by many factors. The objectives of the study were to analyze the risk differences of perinatal mortality according to maternal factors, infant, and health care in Puskesmas Candi.

This was an observational analytic with case control study. The research samples were 39 case samples and 39 control samples. Samples was selected using simple random sampling technique. The data were collected from secondary data. The calculation of odds ratio and risk difference was done to each research variables.

The risk was calculated with 95% Confidence Interval and the results of maternal factors were not risk factors of perinatal mortality. In infant factors, LBW (OR 49.18 95% CI 6.54<OR<2080.94 RD 0.648) and preterm gestation (OR 10.8 95% CI 2.60<OR<62.14 RD 0.500) were risk factors of perinatal mortality. In health care factors, the labor’s way (OR 10.21 95% CI 2.77<OR<45.67 RD 0.500) was the risk factors of perinatal mortality. Variables with the highest RD value are asphyxia and pregnancy’s complications.

Low birth weight, preterm, and infants from action labor’s way need to get adequate care. Pregnant women should have antenatal care regularly for the early detection of pregnancy’s complications. Health professionals should increase their vigilance and responsiveness in decreasing the effect of asphyxia and pregnancy’s complications in maternal and infant health.

**Keywords:** perinatal mortality, risk difference, LBW