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Intra Urban Differentials of Fetal Mortality Rates in Sao Paulo City, Brazil.

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INTRODUCTION: Fetal mortality is usually associated to mother’s health conditions and prenatal care. The aim of this study is evaluate intra urban differentials of fetal mortality in São Paulo City, Brazil.

METHODS: São Paulo City has 96 administrative districts. Data on fetal mortality rate (FMR) and live births (maternal education, high parity > 4 previous births, prenatal care visits and adolescent fertility rate) from 2010 were used. To provide a representation of socioeconomic and territorial conditions of the city was employed the

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Social Vulnerability Index (SVI), which is a composite indicator (income, education, longevity, age of household head) of SEADE Foundation. The percentage of census small units (census sector) belonging to the high and very high strata of SVI was used as measure of social vulnerability and the districts were grouped into five SVI clusters. A linear regression model was performed to identify the association between FMR and social vulnerability variables.

**RESULTS:** The vulnerability increases from the center to distant districts of the city. There was a gradient of increased FMR with the increase of social vulnerability (5.7 to 8.2/1000 births). This trend was also observed for adolescent fertility rate (13.2 and 30.8), high parity (2.8% to 5.8%), < 6 prenatal visits (15.7 and 25.1) and mothers < 8 years of schooling (10.6 and 22.0). The reference group (1) was the lowest SVI in the regression model. The difference of FMR showed a gradient from the lowest to the highest SVI (6.0 in group 2; 6.4 in group 3; was 7.8 in group 4; was 8.3 in group 5 (P < 0.001)).

**CONCLUSIONS:** The social vulnerability can also be expressed through the adolescent fertility rate, low mother’s education, inadequate prenatal care and high parity. The heterogeneity of living conditions and spatial concentration of poverty is also expressed by fetal mortality rate differentials.