Iron deficiency is the most prevalent and neglected nutrient deficiency in the world, particularly among pregnant women and children, especially in developing countries. Many developing countries therefore implement iron supplementation programs. Compliance to iron and folic acid supplementation during pregnancy is therefore considered key to prevention and control of iron deficiency anaemia. In Kenya, compliance to the intake of the supplements has been very low with only 2.5% of pregnant women taking iron supplements > 90 days of the recommended 180 days. The study therefore sought to establish effects of non-compliance to iron folic acid supplementation among pregnant women attending antenatal clinic in 4 major government hospitals in Nyeri County, Kenya. This research applied the descriptive research design. A sample of 384 women was determined by using the modified formulae by Fisher. Simple random sampling was used to recruit respondents. The study employed the use of a structured researcher administered questionnaire. Descriptive statistics were used to analyze the data. Chi-square tests were used to test for relationships with the help of SPSS. Findings were presented in form of tables and charts. The study found that among the patient-related factors, there were significant relationships between Compliance to IFA supplementation level of education (p=0.00), socio-economic status (p=0.04) and residence (p=0.00). There were no significant relationships between therapy related factors while distance to hospital (p=0.00), awareness (p=0.001) and ANC attendance (p=0.00) were significant among the health system factors. The study concluded that patient-related and health system factors are the factors associated with non-compliance to iron/folate supplementation among pregnant women attending antenatal clinics in Nyeri County, Kenya. The study recommended for early education on IFA and the necessity on taking the supplements.