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OPTIMIZATION OF MEDICAL AID FOR PREGNANT WOMEN WITH IRON DEFICIENCY ANEMIA BASED ON PREDICTIVE MODELING OF THEIR HEALTH STATE WITH DUE CONSIDERATION OF MEDICAL AND SOCIAL RISK FACTORS

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The monograph is devoted to the study of medical and social characteristics of pregnant women with iron deficiency anemia in the Voronezh region with the use of modern information technologies, methods of modeling and forecasting. The represented results are the basis for the adoption and implementation of science-based managerial decisions intended to prevent pregnant women from the iron deficiency anemia.

The work is designed for health professionals and managers of health care institutions, obstetricians-gynecologists, as well as a wide range of readers interested in the health of pregnant women with iron deficiency anemia.

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Introduction

The scale of the demographic crisis that has developed in the last decade of XX century in Russia is intensified by the negative impact of the socio-economic crisis and the decline in the standard of living of the greater part of the population. The present demographic situation is characterized by low fertility rates, high rates of overall mortality and reduced life expectancy of the working population. In these circumstances the reproductive health of the population remains one of the vexed health and social problems in our country [108, 200, 202]. According to the official statistics, deterioration of reproduction comes in the setting of pregnant women health deterioration: for the past 10 years anemia of pregnancy has increased more than sixfold, diseases of the genitourinary system -almost fourfold, diseases of the circulatory system - twofold, gestoses - 1.8 times [7].

Iron deficiency anemia (IDA) is the leader among the diseases that complicate pregnancy. According to the World Health Organization, the IDA frequency of pregnant women is 80% (Hb level is taken as the criterion of IDA) or 90% (as measured by the level of iron in the blood serum). This pathology is 20% in Moscow and 80% in low-cost areas. In the Russian Federation IDA is diagnosed in 42% of pregnant women. IDA in the developing countries is 35% -75%, while in developed nations it is 18-20%. It is accompanied by the numerous complications during pregnancy, childbirth and postnatal period, as well as adverse health consequences for the newborn children [171].

The IDA complications are the complications of pregnancy, childbirth and the postnatal period: early pregnancy toxemia (44-48%), threatening miscarriage (15-42%), late pregnancy gestosis (40%); the frequency of placental insufficiency (more than 40%), the frequency of intrauterine hypoxia (35%), intrauterine growth retardation is diagnosed in 30% of pregnant women, labor abnormalities (10-15% of women with IDA); 29% of infants are born in a state of asphyxia, purulent-septic diseases of 12% of postpartum women as well as 37% of infants are recorded.

It should be noted that in addition to medical and biological factors a number of medical and social factors have significant influence on the health of pregnant women, postpartum women and newborns: education of a woman, the level of financial security, living conditions, food, marital status, occupational hazards at work, terms of employment, social habits etc.

In this regard, the development of the first choice options for the management of IDA pregnant women medical aid is of the prime importance. However, nowadays the issues of monitoring of health conditions of pregnant women with IDA as well as the methodology of continuous analysis, evaluation and prediction of their state of health with due consideration of medical and social risks are not sufficiently developed.

The materials set out in this book are the results of theoretical and medical sociological research carried out by the authors, and focused on the main issues related to the development of science-based recommendations for rationalization of
IDA pregnant women medical and preventive care based on the prediction of pregnancy, birth and early neonatal period according to the medical and social characteristics.

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