Introduction:
Since nitrogen oxide (NO) is an essential component of the immune system, the dynamics of plasma NO concentration was studied in order to predict the development of sepsis [1, 2].

Methods:
With the permission of the Ethics Committee included the 200 full-term newborns with respiratory diseases on a ventilator, retrospectively divided into two groups (I, n=46 - sepsis 4-5 days; II, n=154 without sepsis), at 1, 3-5, 20 days was studied by ELISA the plasma concentration of NO, NOS-2, NOS-3, ADMA (Multilabel Coulter Victor-21420, Finland). To select points "Cut-Off" used the method of ROC-Lines.

Results:
The statistical power of the study was 86.7% ($\alpha<0.05$). At admission in patients of groups I and II decrease the concentration of NO and increased ADMA in plasma (p<0.05) relative to healthy newborns. After 3-5 days, relatively in patients of groups I and II increased (p<0.05) plasma concentrations of NO, NOS-2, NOS-3, ADMA. NO concentration in patients with sepsis (I) was lower (p<0.05) compared to group II patients at all stages of observation. NO concentration in plasma of less than 7.30 $\mu$mol/l at admission predicted the development of sepsis with a sensitivity of 88.00% and a specificity of 82.66%.

Conclusion:
The significance of a low concentration of NO in the development of sepsis confirms the relevance of further study of the efficacy, safety and cost-effectiveness of prevention of sepsis, inhaled nitric oxide or other donators NO.

References:
1. Ryazantseva N.V. Intracellular gas intermediates nitric oxide, carbon monoxide and hydrogen sulfide are involved in the regulation of apoptosis // Cytology. – 2012. - Vol. 54, (2) – P. 105-111.