

SUCCESS OF DECREASING NEONATAL MORTALITY IN TURKEY

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SUMMARY: Neonatal mortality rate has been higher in Turkey, 26/1000 in 1998, whereas 10/1000 in 2009. Within 11 years due to the advances in health policy, Turkey achieved a significant decrease in neonatal mortality, that Organisation for Economic Co-operation and Development countries reached within 30 years. In order to determine prenatal, natal and early postnatal health care and to introduce new goals to preserve more qualified health service throughout the country, "Infant Death Registry-Report Form" was formed by the leadership of Health Ministry of Turkey in 2005. This was the first step to be aware of the number and the causes of the neonatal deaths. Close antenatal care, attendance of skilled personnel to the deliveries, encouraging breastfeeding, prevention of hospital infections are some of the prevention strategies whereas standardized neonatal resuscitation programme wholeout the country, improvement of neonatal intensive care units and transportation conditions, increased number of skilled health personnel are the treatment solutions.

Key words: neonatal mortality, antenatal care, resuscitation

INTRODUCTION

Child survival programs have reduced the death rate among children under age five over the past 25 years all over the world (1). Since the vast majority of under-five deaths are in the neonatal period, there has been an increasing attention to prevent them (2). The determination of neonatal mortality rate is important to evaluate the developmental, socioeconomic and health status of a country. In the world, more than 4 million of 130 million babies born annually die in the neonatal period and 99 per cent of these deaths occur in developing countries (3). Neonatal mortality rate per 1000 live births are 4 in high-income, 26 in middle-income and 37 in low-income countries, which accounts 26 globally (2, 4-6). Although neonatal mortality is a global problem, each country should develop own interventional pro-

grams to prevent it. A developing country, Turkey, achieved a significant progress in health status in paralel with the world all over the years. The advances in health policy of Turkey have declined the neonatal mortality within eight years that of Organisation for Economic Co-operation and Development (OECD) countries reached within 30 years.

ORGANIZATION FOR DETERMINING NEONATAL DEATHS IN TURKEY

Up to date, there has been no clear data about the neonatal deaths of Turkey. Erdem (7) conducted a prospective study to investigate perinatal mortality rate, stillbirth rate and early neonatal mortality rate in 29 centres throughout Turkey in 1999. In order to determine prenatal, natal and early postnatal health care as well as maternal and child health and to introduce new goals to preserve more qualified health service "Infant Death

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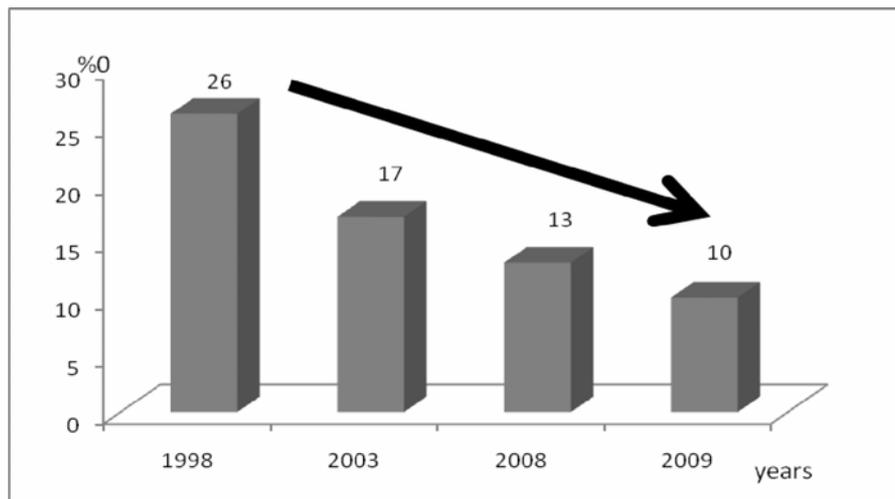


Figure 1: Neonatal mortality rate of Turkey in years.

Registry-Report Form” was formed by the leadership of Health Ministry of Turkey in 2005. By this attempt, “the deaths within the first year of life” have begun to be gathered in monthly periods from the health institutions, both public and private, in Turkey. This was the first step to be aware of the number and the causes of the neonatal deaths, planning new strategies to decrease it to the levels of OECD countries.

SUCCESS OF DECREASING NEONATAL DEATHS IN TURKEY

Neonatal mortality in Turkey have declined sub-

stantially over the past 10 years, 26/1000 in 1998, 17/1000 in 2003, 13/1000 in 2008 and 10/1000 in 2009, respectively. The advances in health policy of Turkey have declined the neonatal mortality within eight years that of OECD countries reached within 30 years (Figures 1 and 2). The available data indicate that maternal and neonatal health interventions have played a major role in decreasing neonatal mortality rate in Turkey. The efficient perinatal and neonatal health policies of the government, the increased widespread of the health services and to provide the use of them more effectively are the most important factors in this decline.

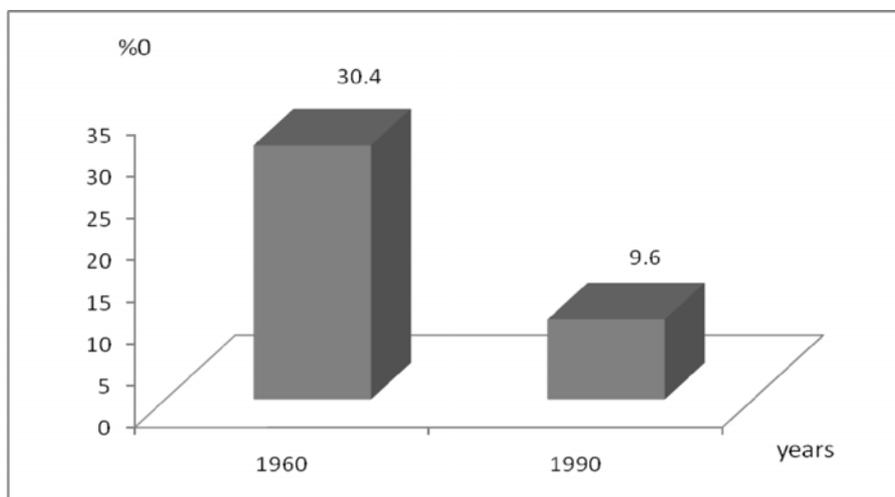


Figure 2: Neonatal mortality of OECD countries.

Prevention Solutions of neonatal mortality in Turkey

- Increase antenatal visit number
- Encouragement of hospital deliveries
- Treatment of maternal diseases
- Prevention of prematurity and multiple pregnancies
- Early diagnosis of congenital anomalies
- Attendance of skilled health personnel to the deliveries
- Encouraging, promoting, protecting and supporting the use of breast milk for infant nutrition
- Prevention of hospital infections- development of "National Infection Surveillance System" to control hospital infections
- Maternal education

Treatment Solutions to Decrease Neonatal Deaths in Turkey

- Standardized neonatal resuscitation programme whole out the country
- Improvement of neonatal intensive care units
- Improvement of transportation conditions
- Increased number of neonatologist and skilled pediatricians throughout the country

PREVENTION STRATEGIES AND SOLUTIONS

It is well known that maternal and neonatal health interventions play a major role in decreasing neonatal mortality rate. As the wellbeing of a child begins in the intrauterine period, antenatal care have been improved. The number of antenatal visits have been increased and the percentage of minimum four antenatal visits, to assess the well being of the mother and the fetus, have been increased within years, 53.9 in 2003, 70.2 in 2007, 73.7 in 2008 and 80 in 2009. Pregnant women living in remote areas are provided with free accommodation in cities for up to one month before delivery (8). Also a cash transfer scheme was introduced, paying mothers some money to visit health services regularly and to deliver their babies in public hospitals, to decrease home births. Health personnel-attended births have increased within years, as 83% in 2003, 89.3% in 2007, 91.3 in 2008 and 95% in 2009, to achieve a sufficient perinatal and neonatal care. Postresuscitation care is important to improve survival and long-term outcomes for newborns who have experienced intrapartum hypoxia and neonatal encephalopathy. Standardization of neonatal resuscitation across the country was tried to be achieved by neonatal resuscitation training programme. Within last 10 years, 925 courses have been performed and 22606 health care professionals have attended to these courses.

The health centers were strengthened with revolving fund and the equipments have been expanded. The number of newborn intensive care beds was increased, 665 in 2002, in 2008 it has increased to 2918 and the increase ratio between 2002 and 2009 is 350%. Within the same years, the number of transport incubators were increased from 158 to 440, the number of ventilators rose from 252 to 491. The number of health personnel was increased, the nurses working in neonatal intensive care unit (NICU) was risen by 155%. To increase the quality of premature newborn care and to decrease the prematurity related deaths, the number of NICUs, the equipment in NICUs are increased and the number and widespread of expert neonatologists and educated pediatricians increased. In selected conditions like perinatal asphyxia, referral level hospitals were chosen and those babies are transported to equipped health centers that can support care and maintain body or head cooling by experienced health care providers. Transportation strategies were improved, all health personnel taking a role in transportation were educated for proper transportation. The equipment of transportation have also been increased. Seventeen air ambulances routinely serve transporting pregnant women and sick children to better equipped centers. The 112 emergency line have been improved and the number of educated health per-

sonnel participating transportation increased. In need, finding appropriate health centers to the patients have become easier and quick.

Education of the mothers is important for healthy newborns. To provide information on the basic issues related to babies and in aspect of reaching all the mothers, "Conscious Mother, Healthy Baby Programme" was initiated. Mothers are also given guidelines consisting of these informations. Early breast feeding is one of the most important factors to prevent infections (9). Mothers are encouraged early breast feeding and maintain it at least up to sixt month of age with the help of expert health care providers. Programmes for encouragement of breast feeding whole out the country were prepared. The hospitals are visited by "National Baby Friendly Hospitals Center Education Team" and the ones that are successful in breastfeeding are chosen as babyfriendly hospitals. The number of the "Baby Friendly Hospitals" reached 665 in 2009 while it was 141 in 2002 (8). As a result of this programme "the percentage of babies at 0-6 months fed only with breastmilk" increased to 40.4 in 2008 while it was 20.8 in 2003.

Hospital infection is a big problem for Turkey. Pre-

vention of infection related morbidity and mortalities are also very important in decrease of neonatal mortality. With the support of Scientific Advisory Board, "National Hospital Infection Surveillance System" was developed in order to collect and analyse hospital infection data and provide feedback, develop policies to control and prevent hospital infections (8).

CONCLUSION

Turkey experienced great achievements on decreasing neonatal mortality. As we stated before, neonatal mortality in Turkey have declined substantially over the past eight years that of OECD countries reached within 30 years. Improved preventable health policies have the major role in this decline. Each major causes of neonatal deaths can be prevented or treated with interventions such as improvements in prenatal, intrapartum and obstetric care and postnatal family-community care. The efficient perinatal and neonatal health policies of the government, the increased widespread of the health services and to provide the use of them more effectively are the most important factors in the decline of neonatal mortality in Turkey.

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