

# How to reduce perinatal mortality? The contribution of Portuguese reform of perinatal healthcare

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*“Great ideas are hard to come by.  
Putting them to work is even harder.”*  
John A. Byrne

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In 2008, the World Health Organization indicated Portugal as an example to follow in reducing perinatal, neonatal and infant mortalities.

It is therefore my intention to share with you the reasons why we are so proud of these results.

High maternal, perinatal, and infant mortality rates, as well as high rates of teenage and no followed pregnancies, reflect poor healthcare organization.

In Portugal, between 1945 and 1971, there was the Maternal Institute to care pregnant women and children up to 2 years of life. However, the perinatal health indicators were bad. With the objectives of reducing infant and maternal mortalities, decreasing deliveries at home, following pregnancies and protecting infants and mothers, the First Generation Healthcare Centers were created in the Seventies to provide primary care to pregnant women and children up to 7 years.

Infant, neonatal and perinatal mortality rates in the Sixties and Seventies were among the highest in Europe (in 1970, infant mortality was 58‰, neonatal mortality was 25‰, and perinatal mortality was 39‰).

The change of political regime in 1974 facilitated the first steps that had begun in the last Sixties, with “Recommendations to normalize primary care in maternal and infant health”. The first definition of three levels of care of hospitals and their articulation (without deliveries, intermediate and intensive care) was created.

In the late Eighties, a group of perinatologists (obstetricians and pediatricians) decided to evaluate all health units where children were born (birth centers) to assess the conditions that they knew to be precarious. At the end of this voluntary field work, they drew up a report which became history in perinatal health: it was the pillar for structural reforms of perinatal health in Portugal and it is still a model for many countries in Europe and worldwide.

Following the report that was presented to the minister of health at that time, a commission to study the problem and propose solutions was appointed. The committee presented a program named “Child and Maternal Hospital Healthcare Referral Network” to start in 1990 and to be fulfilled in a decade.

The key point made in the document was the classification of hospitals in health care levels with definition of the roles of each one: the Perinatal Care Hospitals, providing care to normal pregnant women and newborns, including a Neonatal Inter-

mediate Care Unit, and the Differentiated Perinatal Care Hospitals, providing care to high risk pregnant women and newborn infants, including a Neonatal Intensive Care Unit (NICU).

After a fairly explanation presented to the local governments of the advantages and disadvantages, the closure of hospitals with few births (less than 1,500 deliveries per year) was successfully achieved, with the closing of about 150 delivery rooms at that time. Recently, also associated with declining birth rates, there were guidelines to pursue the merging of obstetrics and pediatrics services. However, there was much dispute with advances and setbacks, and success was not so notorious.

Hospitals and the Primary Healthcare Centers, which had worked without any joint so far, began to be, functionally, linked with the creation of functional coordinating units. They hold meetings to discuss the patients of these health centers transferred to the hospital, they organize sections to discuss clinical practices, they develop clinical protocols to be strictly followed, etc.

A neonatal transport in the country started to work in Lisbon, Porto and Coimbra, being an alternative to the best transport for the newborn – the mother’s womb, whenever *in utero* transport was unavailable. Each neonatal transport was done by a pediatrician and a nurse, both trained in neonatal intensive care and being staff of neonatal units. This policy was maintained until four years ago. In these last years a specific transport for both newborn and child is in place, done by a group of pediatricians and nurses trained in pediatric and neonatal intensive care.

The referred document did mention the number of professionals needed for intensive and intermediate care respecting international ratios, as well the necessary equipment for each hospital.

Another aspect that was implemented was the post-graduation of pediatricians in neonatology. The Cycles of Special Studies on Neonatology were created in university hospitals to the effect.

I cannot fail to mention how important it was for the effectiveness and success of this program the serial and regular evaluation of the results of this implementation, made by all stakeholders.

Let’s see what happens in practice. The geographic rectangular area of Portugal facilitated regionalization, with its division into three zones (North, Center and South).

The network works as follows: the level II hospitals transfer mothers or newborn to level III hospitals in their area whenever needed; the very

low birth weight (VLBW) newborns must be born in level III hospitals; all transfers of pregnant and newborns are carried out according to the pathology, the geographical area and the availability of places.

Knowing that the scientific societies have the ultimate goal of improving health care, the pediatricians organized and created the Neonatal Section integrated in the Portuguese Society of Pediatrics, which is articulated with other pediatric sections and societies. A very important issue was the elaboration of national rules and protocols, first to standardize methodologies, and then to conduct national and multicenter studies.

The national registry of VLBW infants, based on the Vermont network, launched in 1994, is an added value in improving perinatal care in Portugal, since this population is a high proportion (about 50%) of mortality.

Since the beginning of the program of the first committee, successive committees holding the guidelines and referral network of perinatal health services have been appointed. This work is fundamental as we know, because the quality of the healthcare provided to pregnant women and newborn infants is expressed in perinatal and child healthcare indicators, which are good parameter of social development.

The success achieved over these five decades is a source of pride for the perinatology professionals today. Nowadays with the current economic crisis we really fear going backwards.

In conclusion, the aims of regionalization were achieved. The organization in primary, secondary and tertiary healthcare resulted in the improvement of perinatal care centered on both mother and child needs. The perinatal care reform in Portugal is an example of how a good diagnosis and adequate proposals combined with a strong political will are crucial for changing.

Today and in the near future we want to keep the benefits of organizational measures, to improve follow-up of VLBW infants at 36 months and 5 years, to promote self-evaluation of the quality of NICUs and to improve the network of neonatal research.

Our hope is that, nowadays, the economics obsession of politic power and the multiple ministerial changes do not lead to decisions that might endanger this heritage, growth and consolidation.

#### **Declaration of interest**

The Author declares that there is no conflict of interest.