

Caring for the future: decrease in infant mortality in Maranhão State

Cuidando do futuro: redução da mortalidade infantil no Maranhão
Cuidando el futuro: reducción de la mortalidad infantil en el estado del Maranhão

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ABSTRACT

Objective: To report on the experience and care provided by the “Caring for the future” program to decrease infant mortality in 17 municipalities of Maranhão, in a proposal work of the Secretariat of Basic Care, in partnership with the Non-Governmental Organization called *Centro Popular de Cultura e Desenvolvimento* (Popular Center for Culture and Development/PCCD) from 2009 to 2015. **Method:** Experience Report of community care that made it possible to create and strengthen solidary relationships among community members. **Results:** The program decreased infant mortality rate and created in the supported communities a platform of health support, uniting information and care in Primary Care. The program trained 34 “Guardian Angels” and 170 “Supportive Caregivers”, mapped seven thousand “luminous spots” and trained more than 7,000 caregivers in health. It served 17 municipalities, 27,191 pregnant women, 291,266 families. **Final considerations:** The program was a catalyst for actions: it unveiled hidden resources in the community, awakened collective responsibility, offered training and built solidary relationships.

Descriptors: Primary Health Care; Infant Mortality; Public Health; Technology; Nursing Care.

RESUMO

Objetivo: Relatar a experiência e atendimento realizado pelo Programa “Cuidando do futuro” para redução da mortalidade infantil em 17 municípios do Maranhão, numa proposta de trabalho da Secretaria de Atenção Básica, em parceria com a Organização não Governamental denominada Centro Popular de Cultura e Desenvolvimento/CPCD, no período de 2009 a 2015. **Método:** Relato de Experiência de cuidado comunitário que possibilitou criar e fortalecer relações solidárias entre os membros da comunidade. **Resultados:** O Programa reduziu taxa de mortalidade Infantil e criou nas comunidades atendidas uma plataforma de sustentação em saúde, unindo informação e cuidado em Atenção Primária. Formou 34 *Anjos da Guarda* e 170 *cuidadores solidários*, mapeou sete mil “*pontos luminosos*” e treinou mais de sete mil cuidadores em saúde. Atendeu a 17 municípios, 27.191 gestantes, 291.266 famílias. **Considerações finais:** O Programa foi um catalizador de ações: desvelou recursos escondidos na comunidade, despertou responsabilidade coletiva, ofereceu treinamentos e edificou relações solidárias.

Descritores: Atenção Primária à Saúde; Mortalidade Infantil; Saúde Pública; Tecnologia; Cuidados de Enfermagem.

RESUMEN

Objetivo: Relatar la experiencia y atención realizados por medio del Programa “Cuidando el futuro” para la reducción de la mortalidad infantil en 17 municipios del Maranhão, en una propuesta de trabajo de la Secretaría de Atención Básica, en asociación con la Organización no gubernamental denominada Centro Popular de Cultura y Desarrollo / CPCD en el período de 2009 a 2015. **Método:** Relato de Experiencia de cuidado comunitario que posibilitó crear y fortalecer relaciones solidarias entre los miembros de la comunidad. **Resultados:** El Programa redujo la tasa de mortalidad infantil y creó en las comunidades atendidas una plataforma de sustentación en salud, uniendo información y cuidado en Atención Primaria. Formó 34 *Ángeles de la Guardia* y 170 *cuidadores solidarios*, mapeó siete mil “*puntos luminosos*” y entrenó a más de siete mil cuidadores en salud. Asistió a 17 municipios, 27.191

gestantes, 291.266 familias. **Consideraciones Finales:** El Programa fue un catalizador de acciones: desveló recursos escondidos en la comunidad, despertó la responsabilidad colectiva, ofreció entrenamientos y edificó relaciones solidarias.

Descriptores: Atención Primaria a la Salud; Mortalidad Infantil; Salud Pública; La Tecnología; Cuidados de Enfermería.

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INTRODUCTION

This article reports on the experience of the program "Caring for the Future"⁽¹⁾, which aimed to decrease neonatal infant mortality rate by 10% in 17 municipalities of Maranhão State, from 2009 to 2015. The infant mortality rate is considered an important marker for measuring the health status of a population. Deaths in children younger than one year old are related to poor social, economic, biological, environmental and maternal and child health conditions. The main causes of death are perinatal diseases, prematurity of pregnancy, prenatal inefficiency, childhood-related diseases and cardiovascular and respiratory problems, and the triad: diarrhea, pneumonia and malnutrition⁽²⁾.

Infant mortality is a term used to describe all deaths of children younger than one year old, occurring in a particular area and in a given period of time (usually within one year). In Brazil, the infant mortality rate rose from 38 to 16 children per 1,000 live births between 1994 and 2010. Even so, during this period, the prevalence of infant mortality was high, since 631,162 children younger than one year died.

The states of the South and Southeast Regions showed the lowest rates, with five having coefficients less than 12 deaths per 1,000 live births. The states of the North and Northeast Regions presented the highest prevalence, since five of them registered coefficients higher than 16 deaths per 1,000 live births. Maranhão State presented 16.1 deaths per 1,000 live births, one of the largest in Brazil. Countries such as Singapore, Iceland and Japan have the lowest infant mortality rates, with coefficients lower than three deaths per 1,000 live births. While Afghanistan has the highest prevalence rate of 144 deaths per 1,000 live births⁽²⁾.

In this context, the infant mortality coefficient is an indicator of health, linked to the social, political and ethical welfare conditions of a given social structure, concrete conditions of housing, salary and the commitment of a given society to its social reproduction. To have any disease, you must have been born and survived the first year of life.

The program was thought from two questions: 1) What is the cause of newborns' death in Maranhão?; 2) In what period is the infant mortality rate in Maranhão higher? Out of every ten children who die in Maranhão State, seven die before 27 days and most of them die from preventable causes such as hunger and cold. This mortality increases, in the interval between hospital discharge, in which the newborn passes through the hands of many health professionals, and the arrival at home, that is, when the newborn begins to die⁽³⁻⁴⁾.

While the hospital is occupied by situations and priorities linked to specialized care, priority in the house of the mother who has given birth recently becomes the maintenance of the baby's life. At home, it is more important to know if there is a clean place for the mother and the baby to rest, or food ready

for the mother who has given birth recently, so that they dedicate themselves and get used to the new partnership. In other words, after hospital discharge, the mother and baby go home and must begin to learn to love, to consolidate the love bond, this vertical love that differs us as humans and is the most beautiful bond of love. The environment needs to facilitate the loving partnership, so that the mother creates bond and milk, in order to overcome the vulnerability of the newborn.

In such a place (the house and not the hospital), period (neonatal and mother), the newborn is fragile, depends entirely on care: if the newborn do not have them, the newborn will die⁽⁵⁾. Since the mother is physically and emotionally weakened by childbirth, it is important to know what people close to the baby think about exclusive breastfeeding and "porridge fingers" (a practice common in Maranhão countryside, where cow's milk is given thickened with cassava flour for the newborn, in a consistency of porridge, in the mistaken and entrenched family belief that the mother's milk is "watery and weak"). And to know, for example, what the mother-in-law thinks about umbilical stump care (it is often the case that spider webs, or coffee grounds, or bits of nest of hornets or cow dung in the stump), such as counseling the folk healer and the traditional midwife on the use of "baby bottle and with sugar sweetened cakes".

These beliefs surround the chances of surviving the newborn and are rooted in powerful traditions. It was found that babies die in the neonatal period as a result of what was performed in prenatal care, if completed and well done; the chances of normal delivery and baby are very high. If the arrival at home, after the hospital discharge, finds a place of silent traditions, habits twisted by these beliefs and that move the daily life, the risks of dying increase.

Throughout the "Caring for the Future" program, we note painfully that basic health care takes care of the pregnant woman and the baby for 270 days, but in the 24 hours that the pregnant woman reaches the hospital network, maternal and infant mortality increases. We observed that they were deaths that could have been avoided with actions of low technological complexity, but very sophisticated in terms of social transformation.

They were in vain deaths, caused by low schooling of mothers, by apathy, bureaucratic slowness and the indifference of so many health services involved. The "Caring for the Future" Program chose as a way the use of social technologies developed by the Non-Governmental Organization PCCD and the construction of a WEP to meet the objective of reducing in 10% of infant mortality.

OBJECTIVE

To report on the experience and care provided by the "Caring for the Future" Program for the decrease of infant mortality in 17 municipalities of Maranhão State, in a proposal work of

the Secretariat of Basic Attention in partnership with the Non-Governmental Organization called *Centro Popular de Cultura e Desenvolvimento* (Popular Center for Culture and Development/ PCCD), from 2009 to 2015.

METHOD

An account of community care experience, which made it possible to create and strengthen solidary relationships among community members. In order to carry out the “Caring for the Future” Program, social technologies of the PCCD were used as a monitoring and evaluation tool, namely: *Plano de Trabalho e Avaliação* (Work and Evaluation Plan/WEP); *Indicadores de Qualidade de Projetos Sociais* (Quality Indicators of Social Projects); *Monitoramento de Processos e Resultados de Aprendizado* (Monitoring of Processes and Results of Learning) and social technologies that were constructed and systematized by the PCCD.

It is a logical procedure concatenated by procedures aimed at: (1) translating the specific and conceptual objectives into operational and concrete objectives, dissected in their dimensions, clarifying the goals to be permanently achieved; (2) defining the various target audiences and protagonists of the program; (3) organizing important questions according to goals; (4) planning activities and action tools according to the questions; (5) defining process indicators, impacts and measurable results at the end of actions; (6) forecasting the time, length and responsibilities.

We chose to report on the situation of the assistance and management practice within the “Caring for the Future” program to decrease infant mortality and 17 municipalities in Maranhão State, that is, to report on social technologies as strategies for intervention in public health.

RESULTS

Use of Social Technology to decrease Infant Mortality Rate

In 2009, there were in Maranhão State 38 municipalities considered by the Ministry of Health, critical for infant mortality, and we realized that an integrated and progressive agenda was needed to help us learn from reality and generate change. The WEP on reducing infant mortality was written in about 300 hours of face-to-face work and distance by Cristina Loyola, Tião Rocha and a group of health professionals. More than 1000 sheets of Ministry of Health resolutions and ordinances on child mortality were organized, streamlined and objectified on five pages after the laborious protocols decommitting process.

In order to meet our objectives, several devices were employed, namely: decommitting protocols on infant mortality by making them punctual and focused; using the social technology of the *Centro Popular de Cultura e Desenvolvimento* (Popular Center for Culture and Development/ PCCD) and writing a *Plano de Trabalho e Avaliação* (Work and Evaluation Plan/WEP) on reducing infant mortality by 10% in 17 municipalities of Maranhão State.

The first step of the program was to conduct WEP training with six classes of the Technical School of the Brazilian Unified Health System (TE/ SUS) of Maranhão, in October and November 2010, in a training course of multipliers for the Technical Course of Community Health Agent (CHA). The WEP was

evaluated by more than 180 nurses and was approved for its feasibility and implementation in the municipalities. The challenge in question was greater, because it was necessary to train professionals who imply with our problem, to find human generosity and solidarity, to unite information and care in basic care, transforming them into permanent learning.

Universities have trained professionals who have quality information, but more challenging is to train professionals who “care”, who want and know how to care. Sometimes we see a separation between knowledge and care, and in Primary Care this phenomenon is usually catastrophic. For example, a lay community takes on the affective and committed posture of caring, but does not always have the technical information necessary to perform good care. On the other hand, health professionals hold a lot of health information, but some of them do not “care for each other” sometimes do not follow the work day or feel directly responsible for the consequences that their “no care” causes. We often think that health professionals who question their individual and direct responsibility for children who have taken measles should be infrequent, because the vaccination coverage of their area was insufficient.

In this way, we identified in each community the existing caregivers, that is, luminous spots, people that without professional qualification knew and wanted to care, cared about each other, and that also needed some, little scientific information so that a new-born did not die. In fact, the luminous spots were lay people, from the community, who looked at health with curiosity to learn and care for.

We also learned that it is not necessary to be graduated to put 70% alcohol in the umbilical stump, to use safer methods to position the baby⁽⁶⁾, to guarantee exclusive breastfeeding up to six months of age, to nest (methods of positioning the baby)⁽⁶⁾ and to use heated water for the bath. In other words, we chose to work with lay people in the community, who trained with necessary information and who cared about each other, people capable of loving each other (love, here, as opposed to indifference) instead of investing in professionals with information, but little committed or indifferent.

Another strategic action was the creation of two social figures: the guardian angel (two per municipality); and the supportive caregiver (ten per municipality). Furthermore, in order to increase the group of health caregivers in addition to the Family Health Strategy, we invite: folk healers, traditional midwives, fathers of the holy and priests of several religious matrices, Community Health Agents (CHA), solidarity neighbors and taxi drivers, to form a single-game team to decrease infant mortality rate by 10 percent. Guardian Angels and Supportive Caregivers are community leaders who are willing to invest in the transformed goal and to care for communities by implementing the WEP of the “Caring for the Future”.

By the middle of 2010, we had a clear goal, and an expanded and skilled “team” in newborn care, Kangaroo Mother Care⁽⁷⁾ (It is a type of humanization and neonatal care that involves skin-to-skin contact between mother and baby, with the optional participation of the father), Integrated Management of Childhood Illness (IMCI), Cardiorespiratory Resuscitation and the WEP with evidence-based medical information and protocols from the Ministry

of Health. We therefore decided to train all luminous spots, almost seven thousand people, as social educators, able to look at the community with a desire to learn, that is, a kind of “ophthalmology course”, to learn to see and learn to learn. The PCCD maintained four educators living in Maranhão State during 2010 and 2011, and moving among the 17 selected municipalities in order to teach the look and see, differently.

However, this was not enough either, because we had old problems and old solutions. It was then necessary to establish different and innovative ways (DIW) to solve situations that were insoluble. We created several DIW, with Guardian Angels and program supervisors in the light of what was experienced in the 17 counties. If we applied the coefficient of infant mortality in the state, we would arrive at a number of 674 babies who were, from the epidemiological point of view “marked to die”, according to the statistical data of infant mortality. The program managed to save 390, more than one per day in the year 2010, as shown in Table 1.

Table 1 – Implementation of the Work and Evaluation Plan and the decrease of infant mortality rate and 17 municipalities in Maranhão State, Brazil, 2010

Municipality	Number of babies expected to die	Number of neonatal deaths	Babies saved	Percentage saved (%)
Açailândia	62	10	52	84
Bacabal	39	18	21	54
Balsas	81	28	53	65
Barra do Corda	54	17	37	69
Buriti	32	10	22	69
Chapadinha	40	30	10	25
Codó	78	23	55	71
Coelho Neto	25	12	13	52
Coroatá	24	6	18	75
Itapecuru Mirim	23	9	14	61
Paço do Lumiar	10	13	0	0
Presidente Dutra	38	6	32	84
Santa Inês	15	15	0	0
Santa Luzia	22	16	6	27
São José de Ribamar	29	27	2	7
Timon	78	39	39	50
Vargem Grande	29	13	16	55
Total	679	292	390	–

To achieve this goal, we have the permanent partnership of the Sousandrade Foundation for Support to the Federal University of Maranhão (UFMA) and the State Department of Social Development. Beginning in December 2009, the “Caring for the Future” program formed, until May 2015, 34 Guardian Angels and 170 Supportive Caregivers mapped seven thousand luminous spots and trained more than 7,000 health caregivers. It served 17 municipalities, 27,191 pregnant women, 291,266 families, as well as distributed 3,567 baby kits, 6,936 kangaroo tracks, 3,468 *umbiguinho* kits and about 3,000 booklets with the WEP and a thousand leaflets on the Companion Law.

Developed, implemented and supervised DIW to decrease infant mortality and created, in the communities served, a platform of support in health that united the information with the care in Primary Care. As part of the results, four pregnant women marriages took place; eight units “Studio G” with makeup, hairdresser and photographer of pregnant women; and two *Casas do Meio do Caminho*, that is, care hotels.

The two *Casas do Meio do Caminho* were painted with earth-en paint (sustainable technology of assignment by the PCCD), they have gardens and living area, with execution and maintenance by the community itself, supported by the program and by municipalities. One of these houses is in Itapecuru Mirim city and has already helped more than ten pregnant women with ten babies born safely. The other house is in Santa Luzia city and assisted three pregnant women with three babies born safely.

Other results of the program include:

- 170 Pockets (pockets of information material on maternal and child health) implanted in Basic Health Units (BHU) in the 17 municipalities;
- Five foot soak workshops for pregnant women (technology for the care and empowerment of pregnant women, assigned by the PCCD);
- Breast milk capture in six municipalities (total of 119 bottles for collection, in the cities of São Luís, Itapecuru Mirim, Vargem Grande, Buriti, Chapadinha and Balsas), sent to the three milk banks of the state (Caxias, Imperatriz and São Luís), constituting what we call the Milky Way;
- 17 groups of *Amigos do Hospital* (Friends of the Hospital), one per municipality, with the purpose of taking each community to adopt the hospital as their own and of their confidence, as well as to participate in the official collegiate of their management;
- 16 maternities that accept and adopt the Companion Law;
- The Technical School of the Brazilian Unified Health System of Maranhão State adopted the program’s writings as mandatory text in the teaching of means to decrease infant and neonatal mortality in its training courses.

As for the training offered, which means the process lived, were performed: 176 on the use of WEP; 145 on newborn care; neonatal IMCI with cardiorespiratory resuscitation; 148 of middle-level social educator, led by PCCD educators; 15 of superior level and nine for the formation of the Guardian Angels in São Luís city; approximately 40 companion for delivery, with the use of the accompanying leaflet; two partographs with two obstetricians from the Hospital Sofia Feldman, from Belo Horizonte, Minas Gerais State; and ten of obstetric and neonatal nursing care for nurses and auxiliaries, provided by seven specialist nurses at the Fernandes Figueira Hospital, in Rio de Janeiro State.

In addition, the program donated four beds, four nets, two digital thermometers, two scales for the *Casas do Meio do Caminho*, two ventilators for infirmaries, mosquito screens for the windows of the city of Itapecuru Mirim and Santa Luzia. puerperium ward and 44 digital blood pressure devices for the quilombola (a resident of a “quilombo” in Brazil) communities of Itapecuru Mirim.

In the midst of these actions, we learned that newborns in critical condition transferred from the interior to the Neonatal Intensive Care Unit in São Luís city, after overcoming the traumatic and early separation of the mother, survived helplessness, respiratory insufficiency and infection, and needed to gain weight to have high, were fed the artificial milk formula because their nursing mothers were not close to breastfeeding. It has become clear to us that artificial milk has a price and breast milk has value. So, we created the Milky Way, a combined effort to make the capture of breast milk in the 17 municipalities reach the milk banks of the macro-regions. While there was milk left in the interior, it was lacking in São Luís to be processed in the milk bank and to feed the babies that were in the ICUs.

We made the Milky Way kit: a medium freezer, an average autoclave, a 350 cylinder motorcycle, a thermal box, sterile or boiled glasses, lots of social mobilization and lots of generosity. Today, we have a maternal breastfeeding platform structured in the municipalities. After "Caring for the Future" has donated a freezer for each municipality, the frozen milk can be processed up to 15 days later in the milk banks.

We also entered into agreements with municipalities, which were approved by the State Department of Health through its Bipartite Interagency Committee (BIC), and were officially used by the Maranhão State. They are: 1) Pact of the Child Friendly Mayor, which consists of seven consultations (one in the puerperium), prenatal visits, laboratory tests and one ultrasound, and all pregnant women immunized against tetanus, hepatitis B and H1N1, and in the puerperium, of all registered babies, neonatal heel prick, vaccines and, until seven days, daily visits of the CHA and a medical and/or nursing consultation; 2) Pact for the Hospital for Life, carried out in municipal hospitals and including the host, companion in the pre-delivery, delivery and postpartum, Kangaroo Mother Care, exclusive breastfeeding, reference register and counter-reference, and verification of deaths.

Finally, a medical report was used to refer to the Neonatal Intensive Care Unit of Hospital Juvêncio Mattos, in São Luís city, so that the baby, when arrives, has the chance to immediately dispose of the existing technological arsenal, since its clinical history of childbirth and puerperium are recorded and referenced; the WEP of infant mortality was approved as an official tool of Maranhão State in the fight against neonatal infant mortality⁽⁸⁾; and five allegations of malpractice and negligence were presented by the health teams of the hospitals visited, which resulted in administrative inquiries.

FINAL CONSIDERATIONS

The conviction that everything that happens in the world must be understandable can lead us to interpret history through common places. Understanding does not mean denying the shocking facts, eliminating the cursed one, or, in explaining phenomena, using analogies and generalizations that diminish the impact of reality and the shock of

experience. To understand means, first and foremost, to consciously examine and bear the burden that events have upon us, without denying its existence or humbly bowing to it. In short, understanding is tantamount to facing reality without prejudices and, with attention, resisting it, regardless of its colors and features.

The program decreased infant mortality rate and created, in the communities served, a platform of support in health that united the information to the care in Primary Care. Assume collective responsibility, according to which each of us becomes responsible for the others. Over the last few years, we have talked a great deal about human rights, but we have stopped talking about the duties that are always duties towards others. The "Caring for the Future" program prevented 390 infant and/or neonatal deaths in 2010 in the 17 municipalities of Maranhão State, invested in training and strengthening social caregivers and carried out various training and training of CHA, modified and contributed with care in the network of health and maternal health, as well as raising awareness of the rights and health promotion of the population.

It's time to write that we become aware of the things we did not know we knew. They are the most unexpected surprises and explanations. We must distinguish guilt and responsibility. There is a responsibility on what one wants that has no other guarantee, but the own will. Do not explain yourself, but take responsibility for your own life for what you want. We are the memory that we have and the responsibility that we assume. The "Caring for the Future" Program was a catalyst for actions such as: Friends of the Hospital, fulfillment of the Law of the Escorts, donation of breast milk to the milk banks and numerous people and institutions that care about life have begun to agree and work to decrease infant mortality.

The decrease in infant mortality served as a motivation and guide for the Assistant Secretary of Basic Health Actions/SES-MA to commit to writing their "Charter of the Future", the WEPs of the child, adolescent, man, woman and of the healthy elderly, who have, in fact, a "final mirage", because the creativity of a transformed community has no limits, is always ahead. The proposal is to work with the multiple vertical and diversified orientations of Superintendency of Primary Health Care/Ministry of Health and make them integrated, humanized and horizontal through the WEP's clientele. The Program decreased the infant mortality rate in Maranhão State, based on information, collective responsibility, training and solidary relationships. Structures were modified and the local logic of health care was reinvented by the creativity of a transformed community. Undoubtedly, this experience does not end in itself, needs to be re-evaluated, reinforced and improved, to guarantee new investments in health by managers.

And finally, we consider that we must still love, in order not to get sick, because the way to reduce the isolation that we are within ourselves surrounded by distances and memories is filling the words, is finally, through words and expanding our limits⁽⁹⁾.

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