Ciência & Saúde Coletiva
cienciaesaudecoletiva.com.br
ISSN 1413-8123. v.30, n.12
DOI: 10.1590/1413-812320253012.16262025EN

From Ceará to Brazil: A historical perspective and challenges of the Community Health Workers - An interview with Carlile Lavor

Anya Pimentel Gomes Fernandes Vieira-Meyer https://orcid.org/0000-0003-4237-8995 [1]; Antonio Carlile Holanda Lavor https://orcid.org/0000-0002-7548-4332 [1]

Abstract *The pioneering experience of Health Agents (HA) has significantly reduced infant mortality and became a national reference, leading to the creation of the Community Health Workers Program (PACS) across the country and, subsequently, serving as the foundation for establishing the Family Health Program (PSF), currently known as the Family Health Strategy (ESF), consolidated as the main Primary Health Care model within the Unified Health System (SUS). Carlile Lavor, a Public Health physician who served as Secretary of Health of the State of Ceará in 1987, was responsible for establishing Health Agents and came to be popularly and affectionately known as the "father of the ACS". In an interview granted to researcher Anya Vieira-Meyer, Lavor reflects on the historical trajectory and contemporary challenges of Community Health Workers (ACS) in Brazil.*

Key words *Community Health Worker, Public Health, Interview*

[1] Fundação Oswaldo Cruz - Ceará. R. São José s/n, Precabura. 61773-270 Eusébio CE Brasil. anyavieira10@gmail.com

Carlile Lavor is a Public Health physician with a career marked by a commitment to Public Health. He spearheaded the Ceará State Health Secretariat (SESA-CE) from 1987 to 1988. In 2015, he implemented Health Agents (HA) in the state. The HW pioneering experience significantly reduced infant mortality. It became a national benchmark, giving rise to the Community Health Workers Program (PACS) nationwide and later serving as the basis for the creation of the Family Health Program (PSF), currently known as the Family Health Strategy (ESF).

Additionally, Carlile was a professor at the University of Brasília (1969-1978); Municipal Health Secretary of Iguatu, Ceará (1989-1991), where he helped create the State Council of Municipal Health Secretariats of Ceará (COSEMS-CE), serving as its first president; and also vice-president of the National Council of Municipal Health Secretariats (CONASEMS); Mayor of Jucás (1993-1996), UNICEF consultant in Angola (2007-2008) and, later, for the Ministry of Health of that country (2014), contributing to the Angolan program of community and health development workers (ADECOS). Between 2008 and 2014. Again, from 2017 to 2022, he coordinated the implementation of the Oswaldo Cruz Foundation (Fiocruz) in Ceará.

In an interview with researcher Anya Vieira-Meyer, Carlile shares reflections on the historical trajectory and contemporary challenges of Brazilian Community Health Workers (ACS).

Anya Vieira-Meyer: Dr. Carlile, in 2024, the ESF celebrated its 30th anniversary. One of the ESF professionals who most distinguishes Brazilian Primary Health Care is the ACS. Could you tell us about the process of creating health agents in 1987 in Ceará?

We can divide the creation of the health worker into three phases: the first phase was the preparation of the health assistant in the Planaltina Project of the University of Brasília (1974-1978); the second phase was the adaptation of the health assistant to the conditions of the northeastern backlands, in Iguatu, Ceará (1979-1986); and the third phase, the preparation for large-scale application of the health worker, with the formulation of the project for universalization of health care for all people in Ceará (1986-1987).

Several favorable factors made this construction possible. The campaign for direct elections and the election of Tancredo Neves created the climate that spurred the preparation of the Ceará Health Congress (CCS) in 1985, uniting associations, unions, and professional councils. The VIII National Health Conference (CNS) in 1986 defined the new health system desired for Brazil.

In June 1986, the campaign for the Ceará state government election began. Candidate Tasso Jereissati embraced the ideas championed by the CCS and the VIII CNS when preparations began for the aforementioned project to universalize healthcare for all residents of Ceará. Immediately after the electoral victory, the project's design was continued, well-defined, and agreed upon by professionals and the elected governor: health for all mothers and children in Ceará as the central objective, within the spirit of a universal health care system. Maternal and infant mortality was shameful, and there had been an international consensus on the lowest-cost measures to reduce it since the Alma-Ata Conference. The cost was compatible with the state's limited resources.

The experience we had accumulated in Planaltina, Federal District, and the Iguatu Region, Ceará, convinced the professionals and the Governor to adopt the health worker. The team that coordinated the project's preparation since the election campaign took over at SESA-CE. A team of pediatricians supported the preparation and implementation of the childcare project.

In 1987, the state of Ceará faced a severe drought. To address this calamity, the federal government sent 200,000 monthly grants of half the minimum wage (MW), which the governor converted into 100,000 grants of one MW. Traditionally, this resource was used to hire men to perform manual labor during the dry season, guaranteeing income for households affected by the drought. However, that year, some of the grants went to the health agents.

In September of that year, the 128 municipalities most affected by the drought had 6,000 women living in poverty who dedicated their days to health worker's activities, receiving a monthly minimum wage: they visited their neighbors, 100 households on average, to identify pregnant women and take them to prenatal care, as well as take them to the maternity hospital for delivery – 30% of children in rural areas were still born at home, in precarious conditions.

The Public Health social worker Míria Lavor, my wife, who had participated in the training of health assistants in Planaltina-DF and coordinated their development in the Ceará

hinterland, formed a team of eight professionals at SESA-CE, who directed the entire implementation of the health agents' activity in Ceará.

With the end of federal government emergency funding for drought in 1988, the team formed at SESA-CE began a new, gradual implementation of the health worker, this time well-institutionalized and financed with the Secretariat's resources. The number of health agents reached 3,433 in 102 municipalities in 1990.

Health Agents are now trained and supervised by nurses selected and funded by the municipalities (a type of counterpart), with an average of 32 workers per nurse. More robust training was implemented, based on the experience of health assistants in Planaltina and its new version, developed in the Ceará hinterland.

Anya Vieira-Meyer: In your opinion, what set Ceará's Health Agents apart? How was the effectiveness of these health professionals evaluated?

Community health agents have been used in many countries in Asia, Africa, and the Americas. Ceará's new health agents had important differences. First, they were integrated into a state health project, which developed over 20 years (1987-2006) under three different governors. The project clearly prioritized the health of mothers and children and adopted primary health care, following the recommendations of the Alma-Ata Conference.

Second, the workers' activity's objective was apparent: to improve the health of mothers and their children and prevent their deaths. The preventive measures were very simple, internationally standardized, and included identifying pregnant women early and following their prenatal care appointment schedules, performing assisted births in a health unit, supporting mothers in exclusive breastfeeding during the child's first months, and monitoring the children's vaccination schedule and observing their weight growth curve.

Third, the health agents were trained and encouraged to develop their intelligence and initiative, following the method developed in the Planaltina Project. They were evaluated monthly by the supervising nurse, who, with the workers, reviewed copies of the health cards of all children aged zero to two and pregnant women in the area. It was a learning experience for the agent and the nurse, who sought to resolve the issues: pregnant women missing prenatal care, breastfeeding difficulties, missed vaccinations, malnourished children recovering, oral fluids used for diarrhea, and mothers' difficulties in obtaining early treatment for sick children. They also identified all births and deaths.

Fourth, the health agents' implementation in Ceará occurred in parallel with the development of the new Health System. In many countries, community health agents were deployed where there were no adequately qualified health professionals. Finally, more than education, solidarity, and a spirit of initiative were highly valued in the selection of workers, and these were especially strengthened during their initial training and monthly evaluations.

In order to assess the health agents' effectiveness, in the first year of implementation in Ceará, in 1987, professors César Víctora and Fernando Barros, from the University of Pelotas-RS, appointed by UNICEF, conducted the first Maternal and Child Health Survey of Ceará (PESMIC), when 8,000 households were visited, interviewing mothers, and examining children aged 0 to 4 years. Three years later, they repeated the survey, and the results showed significant progress in pregnant women's access to prenatal care, in reducing child malnutrition, improving breastfeeding, in the use of oral serum, the vaccination of children, and reducing infant mortality[1]. Also in 1990, Professor Maria Cecília Minayo and Ennio Svitone compared the health of children in Ceará in municipalities with health agents and those that had not yet implemented them[2]. This study highlighted aspects that enabled the positive results of health agents, such as community recognition and focus on specific actions. A third piece of information about the effectiveness of the health agents came from the Ministry of Health's 1990 Vaccination Report, which confirmed increased vaccination of children in Ceará in 1989, achieving coverage rates superior to the Northeast region and the country in 1990[3].

We should underscore the international interest and recognition of Ceará's experience with health agents. Professor Judith Tendler of the Massachusetts Institute of Technology (MIT) brought seven master's and doctoral students to conduct research in Ceará in 1992. The results of these studies yielded academic publications such as "*Why Fewer Bells Toll in Ceará: Success of the Community Health Worker Program in Ceará, Brazil*"[4], a master's thesis by sociologist Sara Beth Freedheim, who conducted home visits with the community health agents in seven municipalities and interviewed nurses, doctors, mayors, and Governor Tasso. Professor

Tendler published the book "*Good Government in the Tropics*" through Johns Hopkins University, translated by the National School of Public Administration as "*Bom Governo nos Trópicos*"[5]. The researchers were impressed by some of the characteristics of the health agents: their solidarity and dedication to the households they supported, and their ability to take the initiative to solve problems. They did not follow protocols but sought solutions. Contrary to international literature, which described public servants as interested only in their salary, they found a person with a minimum level of education, earning a minimum wage, who arrived at homes, bathed the children, cut their hair and nails, and prepared oral fluids, all while supervising the busy mother in the kitchen!

The state of Ceará was graced with the Maurice Pate Award from UNICEF in 1993, due to the dramatic drop in infant mortality. For the first time, the award was dedicated to a Latin American project. Among all the initiatives focused on child health in the world, the award was given to the government and people of Ceará[6].

Anya Vieira-Meyer: How did the expansion of health agents to other regions of the country occur?

With data on the effectiveness of health agents on maternal and child health, Minister Alceni Guerra decided in 1991 to fund the extension of Ceará health agents to all northeastern states, which became known as Community Health Workers (ACS). Thus, the Community Health Workers' Program (PACS) was born in northeastern Brazil[7]. To achieve this expansion, the group coordinating the work at SESA-CE traveled to all states in the region to support the initial implementation. The ACS also began working with riverside populations along the Solimões and Amazon rivers, focusing on controlling the cholera epidemic originating from Peru. Professionals from Ceará also supported this implementation in the North region. The PACS was a great success and had a positive impact on the health of the Northeastern population, especially the most vulnerable. The nurse-supervised ACS model ensured quality care and continuous learning for both ACS and nurses. The Family Health Program (PSF), which incorporated ACS into its core team, expanded this PHC model nationwide[8].

Anya Vieira-Meyer: You have mentioned the Planaltina experience a few times. Could you talk a little about this experience and how it relates to the creation of the ACS? Did other experiences inspire the creation of the health agents?

With the lessons learned from the Integrated Health Unit of Sobradinho (UISS), a reference in comprehensive clinical training, linked to the creation of the Medicine course at the University of Brasília (UnB) in 1966, the Integrated Community Health Program of Planaltina (PISCP), a satellite city of the Federal District[9], was developed. Planaltina had the most significant rural area in the Federal District and an extremely vulnerable population. The program brought together UnB, the Federal District's health and social services secretariats, with support from FUNRURAL and the Kellogg Foundation. Coordinated by Professor Frederico Simões Barbosa, it included other UnB faculty members. The Planaltina Social Development Center, part of the Federal District's Social Services Secretariat, directed by Míria Lavor, and the Planaltina Health Unit, part of the Federal District's Health Secretariat, were instrumental in the project.

At the time, as a professor at UnB, I identified health needs and methodologies that could be used, from a community perspective, to improve the health of the population, especially children. It became clear that the focus should be on vaccination, encouraging breastfeeding, hygiene, prenatal and well-child care, and early treatment of diseases. Thus, the idea of health assistants as popular educators took hold. Míria's expertise, understanding how to reach homes and engage with the population, was vital to the PISCP.

The program ran for five years (1974-1978). In the first year, the use of community health assistants was defined as a pilot project for the ACS. The first two years were devoted to project preparation, aligning the needs of the population with the activities to be performed by the assistants, primarily related to education and community engagement initiatives. To this end, a detailed methodology was devised for the selection and training process of the assistants.

In the third year, assistants were selected and trained for six months. Approximately 30 health assistants were selected from the community. Community activities started in the third year, during which, supervised by social services, each assistant supported approximately 50 families in the dispersed rural area and 600 families in the urban area.

Two key distinguishing features of the Planaltina health assistant were the definition of their primary objective as maternal and child care, given the high child morbidity and mortality rates in that region, and the methodology for their selection and training. This methodology was developed primarily by the Social Service team, integrating their knowledge with the teachings of Group Dynamics, developed by Lauro Oliveira Lima, a proponent of Jean Piaget's teachings, and Paulo Freire's lessons.

The program was discontinued because the University realized that the Planaltina program was not aligned with the prevailing hospital-centered, specialty-based type of medicine in the country. However, during this program, the fundamental ideas of the future ACS were established.

In this context, the strength of the SUS and the ESF lies in their origins in the most diverse territories, ensuring that many, rightly so, feel involved in their development. Therefore, we stress the existence and importance of several initiatives that have been implemented in the country, such as the Murialdo Health Center-School in Porto Alegre, the Jequitinhonha Valley, and Montes Claros in Minas Gerais, the Integrated Health Unit of Sobradinho in the Federal District, and the Institute of Preventive Medicine at the Federal University of Ceará, among others.

Anya Vieira-Meyer: And what about the experience in the Ceará hinterland, in the Iguatu region? When did this process begin in Ceará?
In late 1978, upon our return to Ceará to participate in the SESA-CE health worker selection process, Míria and I went to work in the Iguatu region, in the south-central part of the state, 400 km from Fortaleza. We moved to our hometown of Jucás, part of a region of 14 municipalities. In Jucás, from 1979 to 1986, we adapted the health assistant program we had experienced in Planaltina to the more severe conditions of vulnerability of the rural population: much poorer, largely illiterate, and with great difficulty accessing water and food[10].

It was a crucial learning experience for the creation of the health agents to gain firsthand knowledge of life in the impoverished backlands of that era and the calamities of drought years like 1983. Infant mortality was generally very high and considered normal, and was exacerbated by hunger and poor-quality water during the drought. Measles, whooping cough, diarrhea, and respiratory and skin infections compounded malnutrition, increasing mortality. Education levels were low. The need for a worker to bring a minimum of health knowledge to each household, which we had identified in Sobradinho, was even more pressing.

Anya Vieira-Meyer: Many transformations have occurred in our society and our healthcare system in recent decades. In your opinion, how do you see the role of ACS in the current situation, and what are the main challenges facing the ESF and ACS today?
The core ideas of the current ACS still date back to 1987, before the 1988 Constitution and the Unified Health System (SUS). Society now is very different from back then. The population is more urbanized, the mean income is higher, education levels have increased, many people are going to university, and life expectancy has improved, mainly due to lower infant mortality. The Unified Health System (SUS) exists and has many results to show, but Brazil remains highly unequal. Twenty million Brazilian households need a grant for staple food baskets, and food insecurity is a reality for many. Schooling has not yet brought them citizenship. They have not acquired essential health knowledge, which is why the need for an ACS continues, as it has for the past four decades.

The ACS mobilized most households to improve children's health, promote breastfeeding, reduce child malnutrition, promote childcare and vaccinations, and foster family planning for couples – all topics that seemed challenging to address. The ACS were specially trained for these tasks and need to complete this work.

Today, ACS are more educated, have cell phones to facilitate family monitoring, have completed the ACS Technical Course, and many have completed university degrees, some with master's and doctoral degrees. They know families well, can observe them as a whole, the child throughout childhood and adolescence, and monitor their development alongside the family, school, and community. It is a new chapter for the training of current ACS, who do not feel prepared to support the prevention of teenage pregnancy, school dropout, alcohol and other psychoactive substance abuse, food insecurity, population aging, child development, and urban violence[11,12].

Nurses trained the first ACS. Current family health teams are enriched with other professionals. They can offer the necessary support for training and working together with ACS to face new challenges, such as those mentioned above.

Local work and social mobilization have always been the foundation of ACS' work and essential for improving the population's health indicators. The challenges have changed and multiplied, but their territorial base and relationship with the community remain the ACS' most significant characteristic and strength.

Collaborations

Both authors contributed equally to the production of the article.

Data availability statement

The data sources adopted in the research are indicated in the article's body.

References

1. Victora C, Fernando CB. *A saúde das crianças cearenses: um estudo de 8.000 famílias*. Fortaleza; 1990.
2. Minayo MC, D'Elia JC, Svitone E. *Programa Agentes de Saúde do Ceará: Estudo de Caso*. Fortaleza: Unicef; 1990.
3. Brasil. *Cobertura vacinal de rotina Brasil - 1989*. Brasilia; 1990.
4. Freedheim SB. *Why fewer bells toll in Ceará: success of a community health worker program in Ceará, Brazil* [Internet]. 1993 [cited 2025 jun 10]. Available from: https://dspace.mit.edu/handle/1721.1/66355.
5. Tendler J. *Good government in the tropics*. Baltimore: Johns Hopkins Univ. Press; 1998.
6. Silva AC. *Viva Criança: Os caminhos da sobrevivência infantil do Ceará*. Fortaleza: Fundação Demócrito Rocha; 1999.
7. Barros DF, Barbieri AR, Ivo ML, Silva MDG. O contexto da formação dos agentes comunitários de saúde no Brasil. *Texto Contexto Enferm* 2010; 19:78-84.
8. Brasil. Ministério da Saúde (MS). *Memórias da Saúde da Família no Brasil*. Brasília: MS; 2010.
9. Barbosa FS. *Programa integrado de Saúde Comunitária. Uma história de caso*. Planaltina; 1981.
10. Santana JP, Castro JL. *Os sanitaristas de Jucás e o agente de saúde: entrevista com Antonio Carlile Holanda Lavor e Miria Campos Lavor*. Una; 2016.
11. Almeida JFD, Peres MFT, Fonseca TL. O território e as implicações da violência urbana no processo de trabalho dos agentes comunitários de saúde em uma unidade básica. *Saude Soc* 2019; 28:207-221.
12. Vieira-Meyer APGF, Morais APP, Santos HPGD, Yousafzai AK, Campelo ILB, Guimarães JMX. Violence in the neighborhood and mental health of community health workers in a Brazilian metropolis. *Cad Saude Publica* 2023; 38:e00022122.

Article submitted 22/08/2025
Approved 27/08/2025
Final version submitted 29/08/2025