

# Critical and reflexive training of community health workers: a strategy for the active professional education in and for the Brazilian Unified Health System

## Capacitação crítica e reflexiva de agentes comunitários de saúde: estratégia para formação ativa de profissionais no e para o Sistema Único de Saúde

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### Abstract

The project was carried out as a project of a group of the Education by Work for Health Program (PET-SAÚDE) and the National Program for the Reorientation of Vocational Training in Health (PRO-SAÚDE). This report addresses the training experience of community health agents on breastfeeding practices and the quality of data recorded in the Basic Attention Information System. The training, conducted from March to June/2013 by students of Nutrition, Pharmacy and Medicine at the Universidade Federal de Ouro Preto (Federal University of Ouro Preto), used a critical-reflexive methodology, favoring the problematization of the work process in primary care and the interweaving of technical-scientific knowledge and empirical studies. The knowledge assessment of the community health agents was obtained through pre- and post-test forms containing questions on the subject. The frequency of exclusive breastfeeding in the Basic Attention Information System dropped from 81.04% to 74.77% from July to September/2012 for the same period in 2013, showing a greater reliability in the data record, supposedly overestimated. This work met the demands related to the local health services and the need of reorientation of professional training in health in and for the SUS, stimulating the interprofessional education and the effectiveness of the teaching-service-community integration.

**Keywords:** Community health workers. Breastfeeding. Inservice training. Higher Education.

## Resumo

Realizado como projeto de um grupo do Programa de Educação pelo Trabalho para a Saúde (PET-SAÚDE) e do Programa Nacional de Reorientação da Formação Profissional em Saúde (PRO-SAÚDE), o presente relato aborda a experiência de capacitação dos agentes comunitários de saúde sobre as práticas de aleitamento materno e a qualidade dos dados registrados no Sistema de Informação da Atenção Básica. A capacitação, realizada de março a junho/2013 por graduandos de Nutrição, Farmácia e Medicina da Universidade Federal de Ouro Preto, utilizou metodologia crítico-reflexiva, favorecendo a problematização do processo de trabalho na atenção básica e o entrelaçamento de saberes técnico-científicos e empíricos. A avaliação do conhecimento dos agentes comunitários de saúde foi obtida por formulário pré e pós-teste, contendo questões sobre a temática. A frequência do aleitamento materno exclusivo no Sistema de Informação da Atenção Básica apresentou uma queda, após a capacitação, de 81,4% para 74,77% de julho a setembro/2012 para esse mesmo período em 2013, evidenciando maior fidedignidade no registro dos dados, supostamente superestimados. Este trabalho atendeu às demandas relacionadas ao contexto dos serviços de saúde do município e à necessidade de reorientação da formação profissional em saúde no e para o Sistema Único de Saúde, estimulando a interprofissionalidade e a efetivação da integração ensino-serviço-comunidade.

**Palavras-chave:** Agente comunitário de saúde. Aleitamento materno. Capacitação em serviço. Ensino superior.

## Introduction

The reflection surrounding the transformation in the professional practices in the health area has focused on the educational background as a relevant matter to favor interventions that are more inserted in the sanitary reality and related to the needs of the Brazilian population.<sup>1</sup>

The educational background of health professionals, ruled by the commitment to solving problems in society, inevitably permeates the reformulation of the conception of teaching as a mere process of passing on technical knowledges for the constitution of citizens aware of their ethical and political performance in society.<sup>2,3</sup>

The professional education in health is, in great part, still facing difficulties such as fragmented, out of date and static curriculums, which produce professionals who are not well-prepared.

There are problems such as inadequacy of competences needed by the population, lack of team work, persistent gender stratification of the professional status, focus on technicality without understanding of the broader context, predominant hospital orientation over primary attention among others. The redesign of the professional education in health is necessary and timely, demanding a deep reflection upon the education of health professionals combined with the adoption of bolder measures of intervention.<sup>4</sup>

This is the challenge for the public universities of the country: to propitiate a critical and reflexive educational background that promotes the active participation in problems of practical order of collective interest that contemplates ethical and political precepts that go beyond technical knowledges.<sup>4,5</sup>

The process of teaching-learning should adopt active methodologies and promote a more immediate insertion of the students in daily primary care in health, integration among students, professors, managers and health workers in the Brazilian Unified Health System (SUS), promoting team work, interdisciplinarity and integration of theory and practice.<sup>5</sup>

In this context, it was up to the ministries of Education and Health, in accordance to the Brazilian Constitution of 1988, to contribute for an adequate reorientation of academic education and qualification of the professionals in the field, instituting the National Program for the Reorientation of Vocational Training in Health (PRÓ-SAÚDE) in 2005. This process of induction of changes in higher education institutions contemplates the immersion of the student in the network of services, privileging those with actions of imminent preventive and collective character, in contraposition to the traditional training focused on university hospitals.<sup>6-8</sup>

The insertion of professionals in training in the environment of the primary care of SUS implicates in situating them in the model of reorganization of services, the Family Health Strategy, instituted in 1994, aiming to promote approximation of the population.<sup>9</sup>

The presence of different professional educational backgrounds is indispensable for a good articulation between them, so that not only the actions are shared, but also have the specific competence capable of enriching the common field of the team.<sup>7,8</sup>

However, for the health professionals to identify and understand the problems inserted in the sociocultural context of the families of the area and be able to offer the necessary cares, it is essential that they search for forms of interaction, that they learn to communicate between them and with different types of knowledge. Thus, the importance of starting to work during the training years, experiencing the interaction with the professionals and the population.<sup>5</sup>

An example of the need of interventions that result in the improvement of health services provided can be presented by the professional foundation of SUS, the community health worker. This member of the health team of the family is an important link with the community, a “social

actor” relevant in the integration between users and health services, favored by the contact that this professional already has with the population by being, necessarily, a dweller and user of the local service, which guarantees a more trusting connection by the family that will be oriented.<sup>10,11</sup>

However, only establishing a link with users is not enough to exercise this function. The community health worker is one of the professionals that generates the most data for the System of Information for Basic Primary Care (SIAB), but the lack of discussion and the use of information by the rest of the team makes these collected data undervalued. This can be verified in a study made by Marcolino and Scochi,<sup>12</sup> in which it was observed that the supervision of records filled in by the community health worker is unsatisfactory and done informally, contributing to a low reliability on the data of the System of Information for Basic Primary Care (SIAB).

Thus, it is extremely important that the community health worker is capacitated and sensitized regarding the importance of the information that he or she can generate, qualifying to fill in the reports and records on the System of Information for Basic Primary Care (SIAB), which will help the teams, the primary care units and the government managers to know and follow the sociocultural reality of the population, evaluating and adapting the services offered, guaranteeing an improvement in their quality.<sup>10</sup>

One of the information generated by the community health worker refers to practices of breastfeeding that reverberate with great impact in the reduction of child mortality, avoiding 13% of deaths related to preventable causes in children under 5 all over the world.<sup>13-16</sup> This information is obtained from data registered by the community health workers in the SSA2 report, one of the forms from the System of Information for Basic Primary Care (SIAB) that consolidates information about the health situation of the families accompanied in each micro area. For the SIAB to be an effective tool for the planning of breastfeeding actions, it is essential that the aforementioned form is correctly filled in.<sup>10</sup>

This report was made considering these matters and the accentuated expansion of the teams of the Family Health Strategy. Especially in the city of Ouro Preto, where a relevant number of new community health workers were recently hired, and added to the necessary insertion of actions of promotion of breastfeeding in the basic primary care network, it was detected the need of a capacitation that ensured the quality of the information acquired according to the standards of the System of Information for Basic Primary Care (SIAB).

This article approaches the experience of graduation students in the health area that, by experiencing new scenarios for the teaching practice,<sup>13</sup> capacitated community health workers regarding practices of breastfeeding, in consonance with the National Program for the Reorientation of Vocational Training in Health (PRÓ-SAÚDE) and the Education by Work for Health Program (PET-SAÚDE).

## Methodological course

The experience consisted of an intervention that tried to capacitate the universe of 120 community health workers that work in primary care units (UBS) of the city of Ouro Preto in the state of Minas Gerais. In 2013, the city had 20 teams of Family Health, nine located in the county seat and the others in each one of the 11 districts.<sup>17</sup>

The activities were planned and developed by an interprofessional group of three monitors of the PRÓ-PET Saúde, Medicine, Nutrition and Pharmacy students, coordinated by an academic tutor, a professor at the Nutrition course at the Universidade Federal de Ouro Preto – UFOP (Federal University of Ouro Preto), and by a preceptor, a nutritionist from the municipal network of health of the Prefeitura Municipal de Saúde – PMOP (Municipal Health Council), and, at the time, coordinator of the Basic Primary Care of the city. All the stages, from the analysis of the context, the planning, the intervention itself and the evaluation were shared.

## The Context

Initially the monitors followed the daily work routine from the community health workers, observing the way these professionals give information to the families about breastfeeding practices, and how they register the data on the reports of the System of Information for Basic Primary Care (SIAB). The criterion to choose the families that would be visited was based on the presence of children under 6 months.

Afterwards, the monitors followed the consolidation of the monthly data of the SIAB by the community health workers together with the technical reference nurse of the Family Health Program of the city to understand the importance of the community health workers in this function.

During this process, it was observed that the registers in the reports did not coincide with the practice of breastfeeding verified *in loco* at the home visited. It was noticed that there was a concern, by the community workers, in overestimating the number of children being exclusively breastfed. After a team discussion, the capacitation of these professionals was the chosen intervention to improve the quality of the data of the SIAB and the performance of these actors in the promotion of breastfeeding.

## The planning

The forms pre- and post-test, like the dynamics used in the capacitation, were planned and elaborated by the monitors with the preceptor in a shared manner, aiming the collaborative practice between the members of the team, the critical, creative thinking and a more effective action from

the community health workers. During the whole process, dialogue was stimulated between the knowledges of the graduation students and scientific and common-sense knowledge, encouraging the exchange of information between the professionals involved, respecting the specific knowledge of each area of each monitor (Medicine, Pharmacy and Nutrition).

## The intervention

The capacitation was made from March to June of 2013, in three meetings with each group of community health workers.

The information was collected on the first and the last meeting, through a questionnaire in the format of pre- and post-test with 34 questions, regarding the following topics: knowledge about breastfeeding, advantages of breastfeeding for the mother and the baby, lactation and breastfeeding techniques, contraindication of breastfeeding, early weaning and the use of nursing nipple (pacifier), importance and use of the System of Information for Basic Primary Care (SIAB).

For the capacitation, it was adopted a teaching-learning model based on the critical-reflexive concept of Paulo Freire, in which learning is an integrated and qualitative process. This approach allows each participant's mobilization to develop in an active, reflexive, critical and solidary way, problematizing reality, making its contradictions explicit, enjoying their own riches and possibilities to learn, creating a new self-knowledge.<sup>18-20</sup>

The activities planned for the capacitation are on Chart 1.

**Chart 1.** Program of activities and description of the dynamics used in the capacitation of the CHW, OuroPreto, 2013.

DAY	PARTICIPANTS	ACTIVITY	CONTENT
1 e 2	2 groups of 60	Handing of ICF Application of pre-test Dynamic 01 Evaluation of the day*	Communication skills
3 to 8	6 groups of 20	Dynamic 02 Conversation group Evaluation of the day *	Importance of SIAB Physiology of breastfeeding Benefits for the mother and baby Medication and Breastfeeding
9 and 10	2 groups 60	Dynamic 03 Application of pre-test Evaluation of the day *	Discussion and evaluation of knowledge
<p><b>Dynamic 01 –Communication skills:the 60</b> participants were divided in four groups of 15 and it was asked that each group represented situations that involved the theme breastfeeding in the community they work at, to raise questions about their skills of communication.</p>			
<p><b>Dynamic 02 –Extending knowledge: the 20 participants were divided into two groups. Each group received a text containing information that defined the practices of mixed and exclusive breastfeeding, while the other group received a text about the importance of breastfeeding. After reading the texts, the groups got together and a list of questions</b> was given to each group aiming the collective discussion of both themes.</p>			
<p><b>Dynamic 03 –Evaluation of knowledge acquired: the 60 participants were divided in four groups of 15. A recipient containing sweets glued to the questions about the topics addressed was passed around all the participants.</b> Next, each participant got one of the sweets, opening the question, reading it and answering in front of the group. Afterwards, the group evaluated if the answer was correct and if that was the case, the participant could eat the sweet.</p>			

\* Form “THAT’S GOOD, WHAT ABOUT THAT, WHAT A SHAME”.

## The evaluation

The data were inserted in the Epi Info software, in which is was obtained the frequency and percentage of hits in the answers pre- and post-test. Data from the System of Information for Basic Primary Care (SIAB) about breastfeeding practices from the months of July to September of 2012 and 2013 were collected in the Secretaria Municipal de Saúde (Municipal Health Secretary).

## Results

From the universe of 120 community health workers of the city of Ouro Preto, 81 effectively participated in the three capacitation meetings.

From the participants, 75 (92,6%) were women, 63 (77,7%) between the ages of 20 and 40 and 67 (82,5%) varied between complete high school and complete higher education. Most of them are single (53,1%) and have 1 to 2 children (45,7%). From the 75 women, 40 (53,3%) had already breastfed. (Table 1).

Regarding the knowledge of the community health workers about breastfeeding, according to the pre-test, 64 (79%) considered that they knew information about “Breastfeeding” while on the post-test, 80 (98,8%) stated the same.

From the 34 questions directed to this theme, there was an average of hits of 70,7% on the pre-test against 83,47% on the post-test. Table 2 allows the verification of the percentage of hits for each topic addressed on the pre-/post-tests.

Regarding the knowledge about the System of Information for Basic Primary Care (SIAB), two questions were made, in which there was an average of 96,3% hits on the pre-test and 98,7% hits on the post-test.

At last, the comparison of the frequency of children from 0 to 4 months in exclusive breastfeeding (EB) extracted from the SIAB, before and after the capacitation, reveals a decrease from 82,6% to 74,8% from July to September of 2012, to the same period of 2013.<sup>17</sup>



**Table 1.** Sociodemographic characterization of the group of CHW participating in the capacitation. Ouro Preto, Minas Gerais, 2013.

VARIABLES	TEST	
	N	%
<b>GENDER</b>		
Female	75	92,6
Male	6	7,4
<b>AGE</b>		
20-40 years old	63	77,7
>40 years old	18	22,3
<b>SCHOOLING</b>		
Incomplete Primary Education	0	0
Complete Primary Education	7	8,6
Incomplete High School	7	8,6
Complete High School	46	56,8
Incomplete Higher Education	15	18,3
Complete Higher Education	6	7,4
<b>MARITAL STATUS</b>		
Single	43	53,1
Married	31	38,3
Divorced/Separated	6	7,4
Did not answer	1	1,2
<b>NUMBER OF CHILDREN</b>		
None	35	43,2
1-2	37	45,7
3 or more	8	9,9
Did not answer	1	1,2
<b>IF A WOMAN, HAVE YOU BREASTFED?</b>		
Yes	40	53,3
No	35	46,7

**Table 2.** Percentage of hits on the pre-test and post-test about the knowledges of the CHW about breastfeeding and SIAB, Ouro Preto – Minas Gerais, 2013.

Topics addressed	Pre-test HITS n e %	Post-test HITS n e %
<b>Recommendations about Breastfeeding</b>		
Ideal period for exclusive breastfeeding	75(92,6)	81(100)
When to breastfeed the baby for the first time	76(93,8)	81(100)
The BM contains nutrients the baby needs until he or she is 6 months	81(100)	81(100)
Ideal moment to introduce the baby bottle	42(51,9)	70(86,4)
<b>Benefits of breastfeeding for the child</b>		
BM is the most adequate food for the nutrition of the baby	81(100)	79(97,5)
BM decreases the risks of CNCND in adulthood	63(77,8)	72(88,9)
Protection of the child against obesity	60(74,1)	78(96,3)
Increase of the coefficient of emotional intelligence	56(69,1)	79(97,5)
Favors affective bonding mother-child	81(100)	81(100)
<b>Benefits of breastfeeding for the mother</b>		
The mother loses weight more quickly	58(71,6)	80(98,8)
EB including at night protects the woman from a new pregnancy	20(24,7)	49(60,5)
Decreases bleeding	24(29,6)	66(81,5)
Favors the involution of the uterus	29(35,8)	59(72,8)
<b>Physiology of Lactation</b>		
When the baby sucks the breast, milk production increases	77(95,1)	81(100)
The use of alcohol and nicotine may reduce production of milk	69(85,2)	76(93,8)
<b>Breastfeeding techniques</b>		
The breasts should be washed daily during the shower without aggressive products	81(100)	81(100)
Positioning of mother and baby promotes the proper grasp	81(100)	81(100)
Breastfeeding can be at any time	66(81,5)	79(97,5)
Duration of breastfeeding should be limited	56(69,1)	79(97,5)
The baby must empty one breast before offering the other	56(69,1)	75(92,6)

to be continued

Topics addressed	Pre-test HITS n e %	Post-test HITS n e %
<b>Maternal health problems that prevent breastfeeding</b>		
CNCD	75(92,6)	71(87,7)
Presence of the HIV virus	58(71,6)	80(98,8)
Presence of hepatitis B and C	21(25,9)	76(93,8)
Herpetic infection, chickenpox or Chagas disease	41(50,6)	72(88,9)
Dengue fever	28(34,6)	73(90,1)
<b>Acceptable reasons for early interruption of EB</b>		
Reduction of baby's hunger	43(53,1)	38(46,9)
Increase of baby's gas	54(66,7)	65(80,2)
The mother has little milk	67(82,7)	66(81,5)
Problems in the breasts	46(56,8)	42(51,9)
Baby does not gain weight adequately	56(69,1)	55(67,9)
Very hot and dry weather	75(92,6)	80(98,8)
Mother's return to work	34(42,0)	36(44,4)
<b>About SIAB</b>		
Meaning of the acronym	78(96,3)	80(98,8)
Data filled in by CHW, inserted in SIAB, are used to plan health actions	78(96,3)	80(98,8)

Caption: BM – Breast milk; EB – Exclusive breastfeeding; CNCD–Chronic non-communicable diseases.

## Discussion

The capacitation of community health workers allowed the increase in the level of theoretical knowledge of these professionals regarding the topic addressed. The use of pre-and post-test forms had a diagnostic function, besides an evaluative one. It was verified an increase in the average of hits, going from 71,53% on the pre-test to 84,32% on the post-test, evidencing a process of construction of knowledge, catering to the demand of the health services in the city, considering especially the strategic insertion of this professional in teams of the family health. Advantages of breastfeeding for the mother, breastfeeding techniques and situations of maternal health that prevent breastfeeding were the topics with the highest percentage of difference on the pre- and post-test, revealing a bigger apprehension of the topic.

The last question in the questionnaire allowed to investigate if, according to the opinion of the community workers, there was any difficulty in understanding how to correctly fill in the SSA2 report from the SIAB. There was a high percentage of hits (96,3%) even before the capacitation. This fact indicates that incorrect report filling was not due to an error in understanding how to do it.

The problematizing methodology used enabled the participants the recognition that the breastfeeding indicators, with data collected by themselves, were not compatible with the perception of reality presented in their daily work. When faced with an indicator of exclusive breastfeeding indicating a frequency of 82,6% from 0 to 4 months, they qualified it as unlikely. The record of children in use of water and teas being computed on the SSA2 report of the System of Information for Basic Primary Care (SIAB) as exclusive breastfeeding, previously observed by the monitors, was pointed by them during the problematizing stage at the beginning of the capacitation. During the discussions it was observed a certain intention by the community workers of “improving” the exclusive breastfeeding indicators so as not to underestimate their work in the community. After the discussion and necessary clarifications, they ended up recognizing the need to adequately register the data for the construction of more trustworthy indicators.

This recognition seems to have reflected in the indicators of the practices of breastfeeding in the System of Information for Basic Primary Care (SIAB) in the months following the capacitation. The decrease in the frequency of exclusive breastfeeding may indicate lower overestimation of the practice of exclusive breastfeeding, therefore, more trustworthiness of the data collected, generating a more reliable system of information for those who plan health policies in the city and contributing to the improvement in the attention to health care provided for the population.

Other contributions within the scope of the professional education in health should be mentioned. This intervention constitutes of a strategy of active learning from real problems for graduation students in the health field, allowing them to build this knowledge experiencing problems in the health services of the SUS while dialoguing with other knowledges. Moments of interprofessional education were possible, and this is understood as “that in which two or more professions learn with, from and about the other, acting in a collaborative way to improve the care with the population”,<sup>21</sup> creating a more horizontal relation, more collaborative and with less hierarchy among the professionals during their education.<sup>22-24</sup>

The shared elaboration of content, of the dynamics and the respective questionnaire used in the capacitation favored the interlacing of technical knowledges, provided by the educational material elaborated, and between the scientific and empiric knowledges revealed by those who participated in the capacitation.<sup>25</sup>

The characteristics of the educational process in group through the application of dynamics allowed the expression of words and gestures, establishing interactions between the participants

and initiating mechanisms of cooperation between the dynamics' partners.<sup>18</sup> It also promoted the development of the communication competence among those involved.<sup>4,25</sup>

The process of evaluation was considered a fundamental stage in the proposed project. The application of the questionnaire was related to the diagnosis, the monitoring of the process and the support to the construction of the knowledge of the CHW, stimulating the learning process of these professionals.<sup>26</sup>

The evaluation of the implementation of the capacitation based on the knowledge of the CHW about breastfeeding allowed the graduate students who are monitors of the PRÓ-PET Saúde to develop evidences and the acquisition of the capacities of collection and analysis of data, use of software for analysis, simulations and tests, surpassing the mere achievement of decontextualized theoretical knowledge to the challenging task of development of competences for the construction of knowledge.<sup>4</sup>

Last, but not least, we highlight the integration of teaching-service-community<sup>27</sup> as an important contribution of this experience, indispensable to the reorientation of the practices in health education, especially when processed in the basic primary care, due to the need of advances in the care model to a full primary care, that is equitable and humanized based on the promotion of health and prevention of diseases.<sup>28,29</sup>

Like other experiences such as the Programs PRÓ and PET-Saúde, the positive impact of these initiatives in the current scenario of transformation of the higher education in Brazil were recognized. It is necessary to advance in the developments of these successful experiences, incorporating them into the regular curricular activities in the graduation courses in the health field.<sup>30,31</sup>

## Final considerations

The reflection produced in this report allows the verification of the contribution of this experience, consubstantiated in the partnership teaching-service-community, for the improvement of the quality of the information generated in the and for the health services of the city, as well as for the redesign of the professional education in health, generating a positive impact on the work of the team and education during practice.

The deepening of the questions and the debate about the insertion of less traditional methodological processes in the professional education in health was considered important, aiming the extension of its use, the improvement of the characteristics of its dynamics and the exploration of possibilities of impact of its results in the extension and improvement of the quality of the current health practices.

There was also the opportunity to deal with a critical-reflexive methodology echoing in the very education of the graduate students what they intended to obtain with the action on the other, developing competences based on reality.

This experience glimpsed a learning that goes beyond the mere acquisition of theoretical knowledge for both instances in the academic education, creating an opportunity for a transformational learning, with the interven(action), forging agents of change of reality, in which those who were capacitating, the graduate students, were also being capacitated, favoring a reflection upon their own academic education.

## Contributors

Menezes JA, Dutra MHM, Fernandes MCS e Passos MC participated in the conception, analysis and interpretation of data, writing of the article. Passos MC elaborated the review of the final version.

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