Building oral health assignments for community health workers through the Delphi technique

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Abstract The literature does not clearly define the assignments of Community Health Workers (CHW) in the field of oral health. This study aimed to redefine the main assignments of CHW regarding their work processes in oral health in basic health care. A theoretical-logical model based on an official publication from the Brazilian Ministry of Health, with six dimensions of work, was used. The model was built based on the assignments of CHW in Dentistry and sent to 30 experts chosen intentionally for the consensual study, using the Delphi technique. The matrix presented the following dimensions: registration of families, mapping the coverage area, home visits, work with community health education, participation in the community, and intersectoral work. These dimensions were detailed with sub-dimensions and measurable criteria. After the study participants analyzed the dimensions, two criteria were excluded. Fourteen experts concluded the study. The final matrix showed the need for CHW to be trained in several oral health topics. This study provides an objective framework of the work process of CHW in oral health and shows their ability to perform oral health promotion, surveillance, prevention, and education actions.

Key words Community Health Worker, Oral health, Family Health Strategy

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Introduction

In 2002, the occupation of Community Health Worker (CHW) was created^{1,2}. On January 5, 2018, Law No. 11,350/2006³, which regulates the activities of Community Health Workers and Endemic Diseases Combat Agents, was changed (Law No. 13,595)⁴, providing the reformulation of assignments, working hours and conditions, degree of professional education, technical and continuing education, and transport compensation of CHW and Endemic Diseases Combat Agents⁴.

According to the Practical Guide of Community Health Workers⁵, oral health actions are divided into three main topics of attention: children, adolescents, and adults. The document about the work of Community Health Workers⁶ explains their actions in the following six dimensions of work: registration of families, mapping the coverage area, home visits, work with community health education, participation in the community, and intersectoral work.

Currently, there is no official publication from the Brazilian Ministry of Health directed specifically to the oral health actions of CHW. The work of these professionals is more characterized by the proximity to the fields of medicine and nursing, showing a certain distance from dentistry⁶. The interaction with professionals from other health fields allows analyzing individuals as a whole and brings attention to the social, economic, and cultural contexts in which they are inserted⁷.

Hence, new learning strategies must be used for training CHW in the Family Health Strategy (FHS) context to qualify their work process with continuing education. It is also observed that the knowledge on the oral health/disease process of CHW linked to the FHS with Oral Health Teams (OHT) is more effective⁸. The challenges found in the work of CHW in dentistry showed the need to reassess the oral health activities they can develop in Basic Health Units (BHU) and FHS, as well as to define criteria and indicators for such an assessment.

The challenges of CHW may result from the unstructured and fragmented qualification process, which is mostly insufficient for them to work in the health field. In oral health, according to Gouvêa et al.8, CHW perform few or sporadic oral health education activities, justifying the fact that they were not trained for it. Dentists could work as tutors and guide these actions.

Thus, building assignments and indicators is essential to assess the effectiveness of actions, solve general and oral problems, make decisions, and get feedback from population and/or intellectual thinking⁹, thus developing continuing health education actions for these workers.

This study aimed to redefine the assignments of CHW regarding the work processes in oral health in BHU and FHS, using the Delphi technique^{10,11}, directed to active managers coordinating national, state, and/or municipal oral health; university researchers and/or professors post-graduated in the field of collective oral health; and dentists working in OHT in basic care

Materials and methods

The study was approved by the Research Ethics Committee of the University of Passo Fundo, Rio Grande do Sul, Brazil. All participants who agreed to participate in the study were responsible for answering the questionnaires but were free to quit the study in the following phases.

Selection of participants

The coordinating team selected the participants of this study intentionally with individuals outside the entity involved (collective health professionals working in the field for more than five years and "known" by the research coordinators). Thirty professionals from different regions of Brazil (south, southeast, north, and northeast) were invited to participate in the study. The number of participants was considered sufficient to provide significant information^{12,13}. Ten active managers coordinating national, state, and/ or municipal oral health; ten university professors-researchers post-graduated in collective oral health; and ten dentists working in OHT in basic care for at least five years were invited via e-mail, using the FormSus™ (http://formsus.datasus. gov.br/site/default.php)14.

Building the questionnaire

The Delphi technique⁹⁻¹³ was used as a research tool and included the following steps: a literature review and a three-phase panel.

A theoretical-logical model was built, consisting of an initial matrix divided into six dimensions of the work process of CHW, theoretically based on an official publication⁶ "Chart 1 CHW".

The coordinating team, made of three researchers, created a questionnaire with individual and quantitative answers complemented by qualitative justification and information¹³.

The initial matrix, followed by the questionnaire, was presented to the participants. The data were collected from November 2013 to July 2014.

The questionnaire was available online through the FormSus^{TM14} platform, which is a service provided by the Department of Informatics of the Brazilian Public Health System for the creation of online forms. This platform is for public use and has well-defined rules. When entering the form in the FormSus^{TM14} platform, it sends the log-in and password to the participants via e-mail. The experts who accessed the online platform were instructed to fill out the form and agreed to participate in the study with a response deadline of up to 15 days. They remained anonymous in all steps of the study.

In the entire study process, three rounds of matrix analyses were performed, with the formulation of suggestions after each round. The data were summarized in Excel spreadsheets and the final result was presented to the participants via e-mail.

First phase: Initial Theoretical Model

In the first phase of the study (initial theoretical model), the participants answered the questionnaire, assigning grades from 0 to 10 to each of the 34 closed questions and six open questions (to indicate other aspects considered significant for the dimension in question) regarding the work process of CHW. For each question, a Visual Analog Scale (VAS) from 0 to 10 was presented. Chart 1 presents the dimensions suggested by the publication "O trabalho do Agente Comunitário de Saúde, 2009" (The Work of Community Health Workers, 2009)⁶.

Second phase: A Consensus Study

After the experts returned the analyses of CHW assignments, the criteria with consensus were maintained and exported to the final logical matrix. The comments obtained in the discursive questions produced the new ones formulated by the organizing team for the second round of the process.

Third phase

The third round defined the weight of dimensions and criteria established. Weights were assigned according to the increasing scale from 1 to 3, aiming to propose a new matrix for the assignments of CHW in oral health.

Statistical analysis

The first two rounds defined the criteria as important and consensual when they reached a mean \geq 7 and standard deviation <3¹⁵. Thus, the criteria with consensus were exported to the final theoretical-logical matrix and the criteria without consensus were excluded. The comments in the discursive questions produced the new ones formulated by the organizing team in a second round.

The third and last round defined the weights of dimensions and criteria, according to the median. The weights of the criteria were deliberated¹⁶. Weighting occurred with the median value divided by the total score of the dimension. The result multiplied by 100 provided the value assigned to the criteria.

Results

Thirty professionals were invited and 19 (63.3%) of them accepted to participate in the study. The methodological route of this study defined the time of 15 days for accessing the FormSus^{TM14} platform and answering the form. The absence of access in this period from the experts invited was considered non-acceptance to participate. In the second phase, 18 (94.7%) participants answered the questionnaire and in the third phase, there were 14 respondents (68.4%) (Figure 1).

First phase of the Delphi study

In the first phase of the study, 32 out of the 34 criteria obtained mean ≥7 and standard deviation <3. Criteria 31 and 32 were excluded for not reaching mean ≥7 and standard deviation <3; they referred to the dimension of "intersectoral work". These criteria addressed the responsibility of CHW to identify sectors and players outside the health field who may contribute to the planning of oral health actions. The lack of agreement in these factors, through the analysis of comments, showed that the participants believe this is up to the FHS and not only to CHW.

In the open questions, seven suggestions or comments from the participants produced five new criteria in the second phase.

Chart 1. Dimensions suggested by the publication "O trabalho do Agente Comunitário de Saúde, 2009"6 regarding the work of Community Health Workers (CHW) in the oral health field.

rega	regarding the work of Community Health Workers (CHW) in the oral health field.			
	Registration of Families			
1	When registering the families, CHW should access information that helps to identify the groups of oral			
	health promotion, protection, and recovery actions.			
2	The CHW may contribute to identifying the groups of oral health actions by using indicators of oral health			
	diseases.			
3	The CHW should identify simultaneous risk or protection factors for diseases of the oral cavity and other			
	diseases (diabetes, hypertension, obesity, cancer, and people with disabilities).			
4	The CHW should identify the main risk factors, such as lack of access to oral hygiene products, excessive			
	and frequent sugar intake, and frequency of dental visits of the families.			
5	Mouth cancer is among the main causes of death by neoplasia. Its prevention is simple by focusing on			
	health promotion, increased access to health services, and early diagnosis. The CHW should identify risk			
	situations for mouth cancer in families, such as smoking, alcoholism, and exposure to solar radiation.			
6	Programed health care is characterized by people registered in the area who are included in the priority			
	group of the health care unit and require continuing care. It is up to CHW, along with the OHT and the			
	community, to identify these groups.			
7	It is up to CHW to identify people with special needs who need to be classified as a priority dental care			
	group.			
8	The oral health risk groups identified by CHW are based on criteria of frequency, risk, and vulnerability to			
	diseases, according to the needs of the local population.			
	Mapping the Coverage Area			
9	Mapping the coverage area of CHW should contribute to diagnose and plan OHT actions. It should			
	also provide relevant oral health information, including access to piped water, private dental offices, and			
	infrastructure of services available.			
10	The oral health mapping should identify information in the registration of families regarding oral health			
	risk groups and situations.			
11	This map should also identify priority dental care groups.			
12	The OHT should cooperate with CHW to formulate this oral health mapping.			
13	The mapping should allow the OHT and CHW to assess interdisciplinary risk situations that relate oral			
	health to other health problems.			

it continues

The feedback of each phase of the questionnaire, with results and comments, was sent to all the participants after each round, informing the mean and standard deviation results and the justification for excluding criteria (Chart 2).

Second phase of the Delphi study

In this phase, five questions were created as a result of the open questions in the first phase, as described above, in the dimensions addressed.

There was consensus in the five criteria presented previously. In the open questions, there were 10 comments. The coordinating team justified all these comments for not adding approaches in the scope of oral health assignments

of CHW. Only one criterion was relocated (criterion 9) because it had a closer relationship with the dimension of "work with community health education", so it was removed from the dimension of "participation in the community".

Third phase of the Delphi study

The third and last phase of the study defined the weight of dimensions of work and criteria of CHW in oral health. The final matrix was presented with 32 criteria and six dimensions of the work process of CHW in oral health, which can be seen in Chart 3. Table 1 described the weights and values assigned to each dimension.

Chart 1. Dimensions suggested by the publication "O trabalho do Agente Comunitário de Saúde, 2009"6 regarding the work of Community Health Workers (CHW) in the oral health field.

irding the work of Community Health Workers (CHW) in the oral health field.				
Home Visits				
During home visits, CHW should comply with the plan developed along with the OHT, based on the needs of every family. New risk situations or groups may be identified during the visit, requiring a new plan.				
During home visits, CHW should stimulate self-care practices in patients for oral health prevention and promotion.				
During home visits, CHW should identify situations that require diagnosis, treatment, and rehabilitation measures and refer them to the OHT.				
The oral health home visits should be planned along with the OHT.				
The CHW may perform educational and preventive procedures in the households, according to the plan established along with the OHT.				
The CHW should prioritize home visits to oral health risk groups and situations, according to the diagnosis and planning established along with the OHT.				
Work with Community Health Education				
The content that CHW may address in educational actions includes oral diseases, diagnosis, and prevention; self-care, oral hygiene, toothbrushing with fluoridated dentifrices, and use of dental floss; instructions about diet, oral self-examination, and care after dental trauma; and consumption of alcohol, tobacco, and drugs.				
The actions of CHW in educational activities should be planned along with the OHT, defining actions per cycle, living conditions, and common risk factors to several diseases.				
The oral health educational activities performed by CHW should comply with the methodologies and didactics defined along with the OHT.				
It is up to CHW, during health educational activities, to explain the functioning of oral health care provided by the city, including information about making appointments, procedures performed, the modality of health care, and secondary and tertiary health care flow.				
The CHW should support and develop oral health activities with the other members of the Family Health Team, integrating health actions in an interdisciplinary manner.				
The oral health educational activities performed by CHW should not overlap the activities performed by the OHT and they should have a complementary character of oral health surveillance and promotion, as defined in the action plan.				
Participation in the Community				
It is up to CHW to exchange knowledge with the community of their micro-area, helping the OHT to develop strategies to face the existing problems.				
The knowledge exchange by CHW with the community may help the OHT to identify the challenges faced by the population regarding access to oral health care in BHU.				
The CHW should identify social spaces in their micro-area, contributing to the oral health planning of the health team.				
The CHW should verify oral health challenges in the community and strategies suggested for facing the problems.				
During the work process, CHW should know, in the community, the living conditions, habits, and measures to solve problem situations and prevent oral health diseases.				
Intersectoral Work				
It is up to CHW to identify sectors and players outside the health field who may contribute to the planning of oral health actions.				
The identification of these sectors by CHW should be based on criteria of risk, work potential, and resources available for oral health work.				
The CHW should recognize conditionalities that interfere with the oral health of individuals such as participation in government social programs (e.g., Bolsa Família) or any other similar income transfer program.				
The CHW, along with the OHT, should participate in the planning of actions of the School Health Program, helping to identify criteria of risk, resources available, and performance of collective procedures.				

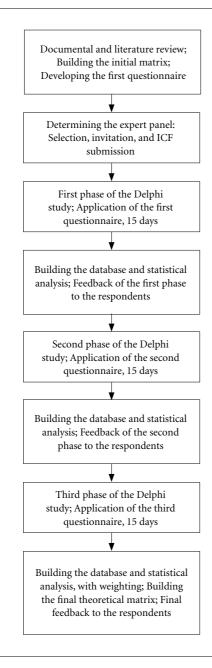


Figure 1. Flowchart of the study.

Discussion

The strengthening of Primary Health Care (PHC) is the main premise of the health care model implemented in Brazil¹⁷ and it has been revised as confirmed by the Brazilian Primary Health Care Policy, ordinance No. 2,436 of September 21,

2017¹⁸. To consolidate the principles and guidelines proposed by the Brazilian Primary Health Care Policy¹⁸, it is essential to respect the culture of the territory and the popular knowledge of people experiencing the health-disease process¹⁷. In this context, CHW should be considered essential parts of the FHS team for playing the role of mediators between technical and popular knowledge, contributing to the proposal of qualification in health care in the search for integral care to individuals, from which oral health cannot be dissociated.

The present study developed a consensus regarding the assignments of CHW in oral health, in six theoretical dimensions extracted from an official publication by the Brazilian Ministry of Health⁶. The final matrix included 32 criteria organized according to the dimensions of the work process of CHW⁶ and it expresses a qualified and consensual opinion of a group of professionals, managers, and university professors/researchers acknowledged in family health and collective oral health.

The discussion and definition of a consensus about the assignments of CHW regarding oral health allow them to work more confidently when addressing dental topics. The CHW has a unique role in a family health team for experiencing the reality of the neighborhood where they work and live, knowing the habits of the population, and approaching the community to health professionals. This facilitates the development of actions that benefit the improvement of the quality of life of users, as stated by Pereira and Limongi¹⁹.

This consensus study is presented with an originality character, considering there are few current studies on the topic. The work of CHW should comply with criteria from the Brazilian Primary Health Care Policy18, contributing to the interdisciplinary work of the FHS. This dynamic acknowledges the importance of CHW to participate in the health team of the community where they live, which offers them a strong relationship between work and social life (NASCIMENTO, 2005)20. However, CHW should constantly acquire skills for improving their professional practice and promoting the development of health conditions of the population in the scope of basic needs18, in which oral health is a significant aspect.

The criteria regarding the dimension of "intersectoral work" were excluded after the expert analyses, for presenting a mean lower than 7. These criteria address the responsibility of CHW

Chart 2. Suggestions for modifications by the experts of the study in the first and second phases of the Delphi study.

study.		
Dimensions of the work process of CHW	First phase	Second phase
Registration of families	No suggestions.	There were no comments on this dimension.
Mapping the coverage area	1- Location of social spaces (schools, daycares, religious groups, residents' associations) to potentiate actions or identify risk sites. 2- To specify the families with individuals who are bedridden/unable to go to the BHU.	1- Sites of difficult access should be identified, such as hills or slopes and/or sites of urban violence; areas with quilombola and camped communities, riparian people, and/or others included in the modality of Family Health team 1. 2- The fact that they are bedridden or have special needs does not make them a priority. They should be identified so the service finds them.
Home visits	3- Inclusion of a topic about bonding during the home visit of CHW, according to OHT assignments.	There were no comments on this dimension.
Work with community health education	4- The activities should meet the habits and culture of the population registered. 5- The CHW has a prescriptive/normative educational posture limited to what is "right or wrong" for users, without considering the context of replication of booklets and manuals from the Ministry.	3- It is important to consider the knowledge and experience of participants, allowing the exchange of ideas. This stimulates people to build a decision-making process that is autonomous and centered on their interests. 4- It is concerning to deal with several skills for the work of CHW and completely disregard the FHS. It seems that there will be separate schedules for health and oral health tasks. 5- The conversation of habits and culture should not be an exclusive assignment of CHW, but the entire team.
Participation in the community	6- Identification and creation of the therapeutic plan considering the Integrative and Complementary Practices of the Brazilian Public Health System ¹⁸ .	- Questions 8 and 9 are not aligned with the premise of participation in the community, as they would relate better to the assignment of health care practices. Therefore, they are considered irrelevant to this component.
Intersectoral work	- Exclusion of items 31 and 32 for not reaching the mean and standard deviation It is "also" up to CHW, in item 31, to identify sectors and players outside the health field who may contribute to the planning of oral health actions Topic 32 depends on the previous knowledge of risk factors and their interpretation, which would be a little far from the reality of CHW, as mentioned in the observations of the first entry field regarding the registration of families Items 31 and 32 should be performed by the FHS team.	- There were no comments on this dimension.

to identify sectors and players outside the health field who may contribute to the planning of oral health actions. The justification for exclusion is that the official publication on the subject by the Brazilian Ministry of Health establishes that this is a re-

Chart 3. Final matrix suggested after applying the Delphi technique to redefine the work of Community Health Workers (CHW) in the oral health field.

vvor	kers (CHW) in the oral health field.
	Registration of Families
1	Identification of groups of oral health promotion, protection, and recovery actions.
2	Identification of simultaneous risk or protection factors for diseases of the oral cavity and other diseases
	(diabetes, hypertension, obesity, cancer, and people with disabilities).
3	Identification of the main risk factors, such as lack of access to oral hygiene products, excessive and
	frequent sugar intake, and frequency of dental visits of the families.
4	Identification of risk situations for mouth cancer in families, such as smoking, alcoholism, and exposure
	to solar radiation.
5	Identification of people with special needs classified as priority dental care.
6	The risk groups identified by CHW are based on criteria of frequency, risk, and vulnerability to diseases, according to the needs of the local population identified in diagnoses performed by the OHT.
	Mapping the Coverage Area
7	To provide relevant oral health information, including access to piped water, private dental offices, and
	infrastructure of services available that may affect oral health.
8	Information should be identified in the registration of families regarding oral health risk groups and
	situations.
9	To identify priority dental care groups, according to the data obtained in the registrations.
10	The OHT should cooperate with CHW to formulate this oral health mapping.
11	Allow the OHT and CHW to assess interdisciplinary risk situations that relate oral health to other health
11	problems.
12	The CHW should locate or map organized social spaces (schools, daycares, religious groups, residents'
	associations, etc.) to plan oral health actions along with the OHT.
13	Bedridden individuals unable to go to the BHU and special needs patients should be classified as priority
	dental care groups.
	Home Visits
14	To comply with the plan developed along with the OHT, based on the needs of every family. New risk
	situations, people, and families may be identified during the visit, requiring a new plan.
15	To stimulate self-care practices for oral health prevention and promotion.
16	To identify situations of diagnosis, treatment, and rehabilitation and refer them to the OHT.
17	To include collective, educational, and preventive procedures that may be performed in the households by
	CHW, according to the plan established along with the OHT.
18	To prioritize home visits to oral health risk groups and situations, according to the diagnosis and planning established along with the OHT.
19	To induce mild technologies, creating welcoming and health care processes in oral health aiming to
	identify the needs of users and the best way to meet them.
	Work with Community Health Education
20	The content that CHW may address in educational actions should include oral diseases, their
	manifestation, and prevention; the importance of oral hygiene self-care, toothbrushing with fluoridated
	dentifrices, and use of dental floss; prevention of fluorosis; instructions about diet, oral self-examination,
	and care after dental trauma; prevention of unprotected solar exposure; and consumption of alcohol,
	tobacco, and drugs.
21	The actions should be planned along with the OHT, defining actions per cycle, living conditions, and
	common risk factors to several diseases.
22	The actions should comply with the methodology and didactics defined along with the OHT.
23	The actions should support and develop oral health activities with the other members of the FHS, seeking
	to approach and integrate health actions in an interdisciplinary manner.
24	The actions should not overlap the activities performed by the OHT and they should have a
	complementary character of oral health surveillance and promotion, as defined in the action plan.
25	The oral health education performed by CHW should meet the habits and culture of the population
	registered.
26	The CHW should know, in the community, the living conditions, habits, and measures to solve problems
	and prevent oral health diseases.

Chart 3. Final matrix suggested after applying the Delphi technique to redefine the work of Community Health Workers (CHW) in the oral health field.

VVOI	workers (CHW) in the oral health field.			
	Participation in the Community			
27	It is up to CHW to exchange knowledge with the community of their micro-area, helping the OHT to develop strategies to face the existing problems.			
28	The knowledge exchange by CHW with the community may help the OHT to identify the challenges faced by the population regarding access to oral health care in BHU.			
29	The CHW should identify social spaces in their micro-area, contributing to the oral health planning of the health team.			
30	The CHW should verify oral health challenges in the community and strategies suggested for facing the problems.			
Intersectoral Work				
31	The CHW should recognize conditionalities that interfere with the oral health of individuals such as the participation in government social programs (e.g., Bolsa Família) or any other similar income transfer and vulnerability coping programs implemented by the Brazilian Federal, state, or city governments.			
32	The CHW, along with the OHT, should participate in the planning of FHS actions, helping to identify criteria of risk, resources available, and performance of collective procedures.			

sponsibility of the FHS as a whole and not of a specific professional category²¹. It should be noted that CHW are part of a team that is little qualified, and it is extremely relevant to train these professionals to work in areas of competence²². To impose high-complexity skills, such as intersectoral work, may complicate the work of CHW in focusing on effective actions for the community.

According to the Brazilian Primary Health Care Policy, ordinance No. 2,436 of September 21, 201718, Primary Health Care and Surveillance should work together to properly identify health problems in territories and plan strategies, and the activities of CHW and Endemic Diseases Combat Agents should be integrated. This policy divided the common assignments of both professionals and the ones specific to CHW, with the difference that they will only perform procedures requiring specific technical skills if they have the respective training, respecting legal authorization²³. The training of CHW is an objective predicted in the Community Health Workers Program²⁴ proposed by the Brazilian Ministry of Health, providing these professionals the chance to care for the population with a degree of solvability compatible to their function, thus contributing to extend health care to the community registered.

The small part of experts who participated up to the final step of the study might be a limitation of the study, considering there was a 37% dropout rate. However, according to the Delphi technique, the number of participants was sufficient to produce a consensus study^{10,13}. The optimal number of participants to perform the Delphi consensus is variable. While Okoli and Pawlowski13 suggest that 10 to 18 experts are sufficient to develop the method, Valdés and Marín²⁵ suggest a minimum of seven experts, observing that the consensus error decreases significantly with each expert added. Nonetheless, studies recommend the caution to invite more members than the number predicted for the panel of experts because dropouts are common^{10,13,25}. Bloor et al.26 stated that, in a Delphi group, the sample size is not as important as the participation balance represented by the range of points of view and knowledge. Moreover, it was not possible to identify the authors of the answers in this research. Although representing interesting data, the FormSus™14 did not allow identifying the users to preserve the respondents, considering the study is confidential.

No new approaches were proposed for the assignments of CHW in the second phase of the study. The issue of Integrative and Complementary Practices of the Brazilian Public Health System²⁷, in the dimension of "participation in the community", was controversial because it depends on the specific training and insertion in the municipal FHS programs; therefore, it is not a work criterion of CHW overall²². The criterion states that CHW should "know the living conditions, habits, and problem-solving measures in the community, as well as prevention strategies

Table 1. Weights and values assigned to the dimension.

Dimension	Weighting of criteria in the dimension (weight/total score)	Value assigned (weighting x100)
Registration of	0.004	0.40
families	0.009	0.90
	0.014	1.4
Mapping the	-	-
coverage area	0.007	0.7
	0.011	1.1
Home visits	0.004	0.4
	0.008	0.8
	0.012	1.2
Work with	0.003	0.3
community	0.006	0.6
health	0.010	1.0
education		
Participation	-	-
in the	0.011	1.1
community	0.016	1.6
Intersectoral	-	
work	0.020	2.0
	0.040	4.0

for oral health diseases". This item was relocated from the dimension of "participation in the community" to the dimension of "work with community health education". During educational activities, CHW should interact with the community to collect such data, according to the principles of the Permanent Health Education Policy²⁸.

The final matrix of this study shows the ability of CHW to perform oral health activities. The data survey from registrations should contribute to planning actions along with the FHS. Thus, using indicators of oral health diseases in this study is important. Population inquiries may subsidize this action, as well as oral health indicators presented in the Brazilian Public Health Action Organizational Contract²⁹. Moreover, in this dimension of work, the final matrix requires CHW to be trained in several oral health topics, such as the relationship with systemic diseases, mouth cancer, and other risk factors, aiming to detect situations that demand oral health promotion, surveillance, and recovery. This need agrees with the results of other studies^{7,30,31}.

Home visits should identify new risk situations or groups and self-care practices of patients.

This study showed that CHW may perform oral health education activities if they are guided and do not overlap the work of oral health auxiliary teams. Additionally, CHW might also perform preventive procedures, both individually and collectively, agreeing with the recommendations of the Brazilian Primary Health Care Policy^{18,32}.

In educational activities performed by CHW, they must follow preset methodologies. The School Health Program³³ and the Primary Health Care Document No. 17¹⁵ highlight the support CHW should provide to educational activities in schools, as well as aid the development of healthy environments, overseeing the offer of healthy food and the potential use of tobacco, alcohol, and drugs in the school environment.

The CHW should participate in the community by detecting challenges and strategies to face oral health problems, focusing on problem-solving measures, guidance for the use of oral health services in BHU, and oral health promotion and prevention according to risk criteria^{34,35}. The study on the perceptions of CHW shows that their object of work is the community and its health problems. However, the regular offer of courses for specific training in areas where they should work is irregular, thus many CHW consider the experience acquired over time important to perform the work³⁶. According to Navarro et al.31, the implementation of oral health programs may be related to the improvement of oral health in the population. Hence, the definition of oral health skills of CHW and their qualification through continuing education will help these programs to reach the objective of improving the oral health of the population³⁷.

In this study, the oral health assignments in the work process of CHW were built according to official publications and as the consensus of a group of experts in the field, using the Delphi technique, in three rounds. Defining criteria is one of the ways to set performance indicators of the work process of CHW. Moreover, it may serve as a base for permanent primary health care education policies. Despite that, CHW have other assignments and plans besides oral health in their work process. Applying this study in practice requires the validation of criteria and further research with this methodology.

It is worth noting that CHW are often subjected to poor work conditions, represented by low compensation, lack of proper technical training, and function deviation³⁸. These situations reflect cities that still find it difficult to implement their requirements due to the lack of

resources for full funding and indicators for the work process. New approaches and the building of assistance strategies take on an even higher significance in the implementation of the Brazilian Public Health System.

We refer to the reflection on the importance of methodological caution and planning of overall health assessment research, including in the field of CHW. There are challenges regarding availability in the theoretical-scientific literature to build a methodology of health assessment studies not restricted to the programs and services. Further studies need to include the perspective of CHW and refine the dimensions, criteria, and the additional steps required to develop an assessment instrument for oral health actions under the responsibility of CHW.

Conclusion

The study allowed building a consensus matrix of oral health work skills of CHW in BHU and FHS, aiming to accelerate the work of OHT in qualifying oral health care in the community.

The final instrument proposed in this study, legitimized by the several players composing the building and validation steps, represents a different alternative for training CHW, allowing a closer relationship between assessment methods of health training and the reality of process effectuation.

Collaborations

AL Sass: developed the research, analyzed the results, and wrote the article. FN Hugo: helped to advise the research and analyze the results. MS Trentin: advised the research and the writing of the article. AH Silva: revised the scientific article. DJ Corralo: helped to write and revise the scientific article.

References

- Vasconcelos M, Cardoso AVL, Abreu MHNG. Os desafios dos Agentes Comunitários de Saúde em relação à saúde bucal em município de pequeno porte. Arqu Odontol 2010; 45(2):98-104.
- Brasil. Lei nº 10.507, de 10 de julho de 2002. Cria a profissão de agente comunitário de saúde e dá outras providências. Diário Oficial da União; 2002.
- 3. Brasil. Lei nº 11.350, de 5 de outubro de 2006. Regulamenta o \$5° do art. 198 da Constituição Federal, dispõe sobre o aproveitamento de pessoal amparado pelo parágrafo único do art. 2° da Emenda Constitucional nº 51, de 14 de fevereiro de 2006, e dá outras providências. Diário Oficial da União; 2006.
- Brasil. Lei nº 13.595, de 5 de janeiro de 2018. Altera a Lei nº 11.350, de 5 de outubro de 2006. Diário Oficial da União; 2018.
- Brasil. Ministério da Saúde (MS). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Guia prático do agente comunitário de saúde. Brasília: MS; 2009.
- Brasil. Ministério da Saúde (MS). Secretaria de Atenção à saúde. Departamento de Atenção Básica. O trabalho do agente comunitário de saúde. Brasília: MS; 2009.
- Holanda ALF, Barbosa AAA, Brito EWG. Reflexões acerca da atuação do agente comunitário de saúde nas ações de saúde bucal. Cien Saude Colet 2009; 14(1):1507-1512.
- Gouvêa GR, Silva MAV, Pereira AC, Mialhe FL, Cortellazzi KL, Guerra LM. Avaliação do conhecimento em saúde bucal de agentes comunitários de saúde vinculados à Estratégia Saúde da Família. Cien Saude Colet 2015; 20(4):1185-1197.
- Elias F, Patroclo MAA. Utilização de pesquisas: Como construir modelos teóricos para avaliação? Cien Saude Colet 2004; 10(1):215-227.
- 10. Balasubramanian D. Delphi technique A review. *Int J Public Health Dent* 2012; 3(2):16-25.
- Ribeiro TR, Pessoa F, Noro LRA. Caminhos para avaliação da formação em Odontologia: Construção de Modelo lógico e validação de critérios. Cien Saude Colet 2015; 20(7):2277-2290.
- 12. Romeiro C, Nogueira JAPD, Tinoco SG, Carvalho KMB. O modelo lógico como ferramenta de plane-jamento, implantação e avaliação do Programa de Promoção de Saúde na Estratégia de Saúde da Família do Distrito Federal. Rev Bras Ativ Física Saúde 2013; 18(1):132-142.
- 13. Okoli C, Pawlowski SD. The Delphi method as a research tool: an example, design, considerations and application. *Information Management* 2004; 42:15-29.
- FormSus®-Versão 3.0. DATASUS [Internet]. [acessado 2013 Nov 10]. Disponível em: http://formsus.datasus.gov.br/ site/default.php
- 15. Souza LEPF, Silva LMV, Hartz ZMA. Conferência de Consenso sobre a imagem-objetivo da descentralização da atenção à saúde bucal. In: Hartz, ZMA, Silva LMV. Avaliação em Saúde dos modelos teóricos à prática na avaliação de programas e sistemas de saúde. Salvador: EDUFBA; 2000. p. 65-103.

- Ashton CM, Kuykendall DH, Johnson ML, Wun CC, Wray MJ, Slater CH, Wu L, Bush GRW. A method of developing and weighting explicit process of care criteria for Quality Assessment. Med Care 1994; 32(8):755-770.
- Maciazeki-Gomes RC, Souza CD, Baggio L, Wachs F. O trabalho do agente comunitário de saúde na perspectiva da educação popular em saúde: possibilidades e desafios. Cien Saude Colet 2016; 21(5):1637-1646.
- 18. Brasil. Portaria nº 2.436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS). Diário Oficial da União; 2017.
- Pereira HS, Limongi JE. Agentes Comunitários de Saúde: Atribuições e Desafios. Hygeia 2011; 7(12):83-89
- Nascimento CMB. Precarização do trabalho do Agente Comunitário de Saúde: um estudo em municípios da região metropolitana do Recife [Internet]. 2005 [acessado 2010 Jul 8]. Disponível em www.cpcam.fiocruz.br
- 21. Brasil. Lei nº 8.080, de 19 de setembro de 1990. Dispõe sobre as condições para promoção, proteção e recuperação da saúde, a organização e o funcionamento dos serviços correspondentes e dá outras providências. Diário Oficial da União; 1990.
- Costa SM, Araújo FF, Martins LV, Nobre LLR, Araújo FM, Rodrigues CAQ. Agente Comunitário de Saúde: elemento nuclear das ações em saúde. Cien Saude Colet 2013; 18(7):2147-2156.
- 23. Brasil. Lei nº 8.142, de 28 de dezembro de 1990. Dispõe sobre a participação da comunidade na gestão do Sistema Único de Saúde (SUS) e sobre as transferências intergovernamentais de recursos financeiros na área da saúde e dá outras providências. *Diário Oficial da União*, 1990.
- Brasil. Ministério da Saúde (MS). Secretaria Executiva Programa agentes comunitários de saúde (PACS). Brasília: MS; 2001.
- Valdés MG, Marín MS. Empleo del método Delphi en investigaciones sobre salud publicadas en revistas científicas cubanas. Rev Cubana Información Ciencias Salud 2013: 24(2):133-144.
- Bloor M, Sampson H, Baker S, Dahlgren K. Useful but no Oracle: Reflections on the use of a Delphi Group in a multi-methods policy research study. *Quali Res* 2014; 15(1):57-70.
- Brasil. Ministério da Saúde (MS). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Política Nacional de Práticas Integrativas e Complementares no SUS-PNPIC-SUS. Brasília: MS; 2006.
- Brasil. Ministério da Saúde (MS). Gabinete do Ministro. Portaria nº 2.761, de 19 de novembro de 2013.
 Política Nacional de Educação Popular em Saúde no âmbito do Sistema Único de Saúde (PNEPS-SUS). Diário Oficial da União; 2013.
- Brasil. Ministério da Saúde (MS). Decreto nº 7.508, de 28 de junho de 2011. Regulamenta a Lei nº 8.080 de 19 de setembro de 1990. Diário Oficial da União; 2011.

- 30. Frazão P, Marques D. Influência de Agentes Comunitários de Saúde na percepção de mulheres e mães sobre conhecimentos de saúde bucal. Rev Saúde Pública 2009; 43(3):463-471.
- 31. Navarro MFL, Modena KCS, Bresciani E. Social disparity and oral health. Brazil Oral Res 2012; 26(1):17-24.
- 32. Brasil. Ministério da Saúde (MS). Resolução nº 333, de 4 de novembro de 2003. Aprova as diretrizes para criação, reformulação, estruturação e funcionamento dos Conselhos de Saúde. Diário Oficial da União;
- 33. Brasil. Ministério da Saúde (MS). Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Saúde na Escola. Brasília: MS; 2009.
- 34. Moretti AC, Teixeira FF, Sus FMB, Lawder JAC, Lima LSM, Bueno RE, Moysés SJ. Intersetorialidade nas ações de promoção de saúde realizadas pelas equipes de saúde bucal de Curitiba (PR). Cien Saude Colet 2010; 15(1):1827-1834.
- 35. Scherer MDA, Pires DEP, Jean R. A construção da interdisciplinaridade no trabalho da Equipe de Saúde da Família. Cien Saude Colet 2013; 18(11):3203-3212.
- 36. Filgueiras AS, Silva ALA. Agente Comunitário de Saúde: um novo ator no cenário da saúde do Brasil. Physis 2011; 21(3):899-915.
- 37. Brasil. Ministério da Saúde (MS). Secretaria de Atenção à Saúde. Secretaria de Vigilância em Saúde. SB Brasil 2010: Pesquisa Nacional de Saúde Bucal: resultados principais. Brasília: MS, 2012.
- 38. Carneiro CCG, Martins MIC. Novos modelos de gestão do trabalho no setor público de saúde e o trabalho do Agente Comunitário de Saúde. Rev Trabalho Educ Saúde 2015; 13(1):45-46.

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