

## Dental auxiliaries versus community health workers: similarities and contrasts

*Profissionais auxiliares da odontologia versus agente comunitário de saúde: similaridades e contrastes*

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### Resumo

**Introdução:** Os profissionais auxiliares da odontologia e os agentes comunitários de saúde (ACS's) são profissionais que representam importante segmento na Estratégia Saúde da Família e possuem funções diversificadas. **Objetivo:** Analisar as atribuições dos auxiliares de cirurgiões-dentistas e dos agentes comunitários de saúde, tanto no aspecto da utilização de seus serviços como na formação, identificando as similaridades e contrastes entre os profissionais da saúde da família, Brasil. **Metodologia:** Estudo quantitativo e censitário conduzido no âmbito do Programa de Educação pelo Trabalho em Saúde- PET-Saúde, 2010-2012. O instrumento de coleta de dados foi um questionário semiestruturado. A análise considerou o nível de significância  $p < 0,05$ . **Resultado:** Participaram 29 profissionais auxiliares da odontologia e 241 ACS's. As funções relacionadas ao contexto comunitário, como conhecer as condições de saúde do território, identificar situação de risco das famílias, visita domiciliar estiveram mais associadas ao ACS's ( $p < 0,05$ ). Em contraste, atividades no ambiente clínico como auxiliar profissional de nível superior e realizar procedimentos clínicos são ações predominantemente dos técnicos/auxiliares da odontologia ( $p < 0,05$ ). As categorias profissionais apresentaram similaridades na prática de vigilância à saúde, reflexão do trabalho em equipe e educação e mobilidade comunitária ( $p > 0,05$ ). **Conclusão:** Similaridades e contrastes foram identificados entre as ações dos profissionais. A categoria auxiliar em odontologia, apesar de funções específicas no ambiente clínico, ao integrar-se à equipe saúde da família reorienta a prática profissional assumindo ações no âmbito coletivo e familiar.

**Descritores:** Pessoal técnico de saúde; auxiliares de odontologia; agentes comunitários de saúde; saúde da família; prática profissional.

### Abstract

**Introduction:** The dental auxiliaries and the community health workers (CHWs) are practitioners that represent an important part in the Family Health Policy in Brazil and have several tasks. **Objective:** To analyze the attributes of the dental auxiliaries and of the CHWs, regarding the application of their services and their education/training, to identify the similarities and contrasts between these health care practitioners. **Methodology:** Quantitative and census method data collection performed on the context of the Education Program for Health Workers - PET-Saúde, 2010-2012. The data collection method was a semi-structured questionnaire. The analysis has a level of significance of  $p < 0.05$ . **Result:** In this paper, 29 dental auxiliaries and 241 CHWs have participated in the surveys. The assignments that take place on the community context, such as home visits were more associated to the CHWs ( $p < 0.05$ ). On the other hand, the activities that happen on a clinical environment, such as providing assistance to graduated health professionals and performing clinical procedures, are more commonly performed by the dental assistant ( $p < 0.05$ ). Both categories presented similarities performing preventive health care, teamwork analysis, informative initiatives and community mobilization routines ( $p > 0.05$ ). **Conclusion:** Similarities and contrasts were identified between these health care workers. The dental auxiliaries, despite being mostly issued to specific assignments on a clinical environment, are able to shift their praxis by taking actions on a family and community context once integrated to a family health team.

**Descriptors:** Allied health personnel; dental auxiliaries; community health workers; family health; professional practice.

## INTRODUCTION

The Family Health Strategy (*Estratégia Saúde da Família* - ESF) presents itself as a proposal to restructure the Primary Health Care (PHC) in Brazil, by following the directives of the Brazilian Unified Health System (*Sistema Único de Saúde* - SUS). The ESF aims to provide continuous and integral health assistance to the community surrounding the Basic Health Care Unit, according to the needs of the population<sup>1</sup>. The ESF team is multi-professional and must act as such. It consists of physicians, nurses, nursing assistants, community health workers (CHWs) and, since the year 2000, it also rallies dentists, dental technicians and oral health assistants<sup>2,3</sup>. The dentistry workers develop preventive actions regarding oral diseases and health promotion routines<sup>4</sup>. The performance of these professionals has been a success factor for the operation of the health care teams<sup>5</sup>.

Even though comparative studies between the roles of the ESF workers are important, they have been overlooked by researchers. The comparison of the roles of the CHWs with those of other health workers may be useful, given the community health worker (CHW) were molded by the family health care policies in Brazil. A recent study<sup>6</sup>, performed with the same subjects of the present paper, has identified the roles of the CHW on a family health care environment. In the present paper, their tasks are compared to those of the dental auxiliaries.

The hypothesis of this study is that many of the tasks of the CHW were also undertaken by dental auxiliaries, despite their role being consolidated in a clinical setting and under the supervision of graduated health professionals. It is believed that a new set of skills had to be attained by the dental professionals in order to act in a family health care setting.

Therefore, discussing the work assignments in the ESF is timely and necessary, as it may contribute to the development of strategies that address the challenges regarding the qualifications of the PHC. This study examined the tasks of dental auxiliaries and community health agents, both in the usage of their services as in their training, identifying similarities and contrasts between these family health workers.

## METHODOLOGY

Quantitative, observational and cross-sectional study made under the Education Program for Health Workers - PET-Saúde of the Universidade Estadual de Montes Claros, 2010-2011 Notice. The proposal had census directed and was developed with CHWs and dental auxiliaries (dental assistants- DAs and dental hygienist- DHs) associated to the ESF in the urban area of Montes Claros city, located in the state of Minas Gerais, Brazil. The aforementioned city is considered a regional urban center of the northern portion of the state, with an estimated population of 361,971,000 inhabitants.

The instrument for data collection was a semi-structured, self-report questionnaire filled by 270 family health workers (241 CHWs and 29 dental auxiliaries). The questionnaire was designed to meet the objectives of the study and derived

from bibliographic research on the subject. A pilot study was performed with only 10 participants to test and adapt the data collection instrument. These subjects were not included in the main study. The actual data collection occurred between the months of August and October of the year 2010.

Statistical analysis was performed using SPSS computer program, version 18.0 (SPSS Inc., Chicago, USA). The descriptive analysis involved the calculation of measures of central tendency of separatrixes and of proportions. To make comparisons between the work categories, Pearson's chi-squared test was used and Fisher Test and Student's T-Test were placed as alternatives. The level of significance considered was  $p < 0.05$  with a 95% confidence interval.

The study was approved by the Health Secretary of Montes Claros and by the Ethics Committee in Research (Protocol #1966/2010), in accordance with the Helsinki Declaration and the Resolution of 196/96 of the National Health Council. All the data obtained is confidential.

## RESULT

A total of 270 health workers were part of the present study, while 29 of those were dental auxiliaries (10.7%). The female gender has been dominant on both categories, being absolute on the dental assistant group (100%), with a statistical difference ( $p < 0.05$ ). The dental auxiliaries presented higher age average, set at 40.08 years old ( $\pm 9.920$ ) ( $p < 0.001$ ). They also present longer average experience on the public sector, set at 6.42 years ( $\pm 5.72$ ) ( $p = 0.054$ ) (Table 1).

Regarding professional certification, the dental auxiliaries reported having taken more courses related to their occupation (93.1%) than the CHWs ( $p = 0.005$ ). Most of the dental auxiliaries believe they are ready to work on SUS (96.6%), with no statistical difference between these health workers groups ( $p > 0.05$ ) (Table 2).

With regard to actions relating to the context of family health workers, the dental auxiliaries (82.8%) have reported being aware of the health condition of the population in their work area, though presenting a lower percentage than that of the CHWs category ( $p < 0.001$ ).

Regarding providing information to the family health care team on the situation of the families served, the dental auxiliaries showed lower percentage of positive response in comparison to the CHWs ( $p < 0.001$ ). The referral of people to graduated medical professionals is also done at a lower rate by the dental auxiliaries (82.1%) ( $p = 0.083$ ). Most of the dental auxiliaries (89.7%) reported allocating some of their time for personal analysis related to their teamwork skills, with no statistical difference between the categories analyzed ( $p > 0.05$ ) (Table 3).

By assessing collective tasks in family health, it has been found that the dental auxiliaries perform home visits (89.3%) at a lower rate than the CHW do ( $p < 0.001$ ). Most of the dental auxiliaries do not make a record of the families (82.1%), unlike the CHWs ( $p < 0.001$ ). The identification of families under health risk was a task associated with the CHWs, although the dental

auxiliaries also provide a significant portion (58.6%) ( $p < 0.001$ ). Dental auxiliaries refer families to health care services (93.1%), however, such task was associated with the CHWs ( $p < 0.05$ ). The performance of educational and health awareness activities was detected in both health work categories ( $p > 0.05$ ). The promotion

of education and community mobilization was observed in lower prevalence in the dental auxiliaries category ( $p < 0.05$ ) (Table 4).

The tasks performed on a clinical setting in the ESF environment were evaluated by the health worker categories. Dental auxiliaries aid graduated health professionals (93.1%),

**Table 1.** Social and Demographic profile of the study subjects. 2010

Subjects of the present study	Community Health Workers	Dental Auxiliaries	Bivariate analysis p
Gender			
Female	79.3%	100.0%	p=0.008
Male	20.7%	0.0%	
Average age (standard deviation)			
	31.92 ( $\pm 7.787$ )	40.08 ( $\pm 9.920$ )	p<0.001
Average time working on the public sector (standard deviation)			
	5.08 ( $\pm 3.179$ )	6.42 ( $\pm 5.72$ )	p=0.054

**Table 2.** Professional Certification. 2010

Professional certification and SUS	Community Health Workers	Dental Auxiliaries	Bivariate analysis p
Certification on their occupation			
Yes	68.0%	93.1%	p=0.005
No	32.0%	6.9%	
Course taken related to their occupation			
Yes	97.9%	93.1%	p=0.124
No	2.1%	6.9%	
Ready for SUS			
Yes	94.6%	96.6%	p=0.652
No	5.4%	3.4%	

**Table 3.** Distribution of tasks of the health care workers performed under a Family Health Care setting. 2010

Family health care setting	Community Health Workers	Dental Auxiliaries	Bivariate analysis p
Awareness of the ESF health conditions			
Yes	97.5%	82.8%	p<0.001
No	2.5%	17.2%	
Reports health condition of the families to the team			
Yes	99.2%	79.3%	p<0.001
No	0.8%	20.7%	
Referrals people to medical graduated professionals			
Yes	92.1%	82.1%	p=0.083
No	7.9%	17.9%	
Self-analysis of teamwork along ESF			
Yes	82.4%	89.7%	p=0.321
No	17.6%	10.3%	

**Table 4.** Group tasks performed by Family Health Care workers. 2010

Group tasks performed by family health care workers	Community Health Workers	Dental Auxiliaries	Bivariate analysis p
Home visiting			
Yes	99.6%	89.7%	p<0.001
No	0.4%	10.3%	
Family record			
Yes	99.2%	17.9%	p<0.001
No	0.8%	82.1%	
Identification of families under health risk			
Yes	99.2%	58.6%	p<0.001
No	0.8%	41.4%	
Family instructing			
Yes	99.6%	93.1%	p=0.002
No	0.4%	6.9%	
Health awareness tasks performed			
Yes	86.3%	96.6%	p=1.115
No	13.7%	3.4%	
Community education and mobilization			
Yes	71.8%	55.2%	p=0.064
No	28.2%	44.8%	

perform clinical procedures on patients (34.5%) and perform disinfection and sterilization routines (93.1%). On the other hand, most of the CHWs do not practice such tasks ( $p<0.001$ ) (Table 5).

## DISCUSSION

The present study was performed with a greater number of CHWs. This is due to the fact that the CHW is part of the family health team, as dictated by the ESF. Each team may have up to 12 CHWs<sup>7</sup>.

The majority of the participating health workers were female, and 100% of the dental auxiliaries were women. Such fact is in accord to other studies focused on dental auxiliaries<sup>8-10</sup>.

The dental auxiliaries have displayed higher average age. This can be partially explained by the fact that CHW is a recent occupation in Brazil. Despite existing since 1991 through the *Programa de Agentes Comunitários de Saúde* (PACS), this occupation was effectively regulated only in 2002, by law n° 10.507<sup>11-13</sup>. Regarding the dental auxiliaries, their occupation exists since the 70's<sup>14</sup>, though it has only been regulated on December 2008 by law n° 11.889<sup>15</sup>.

The average time working for the public sector was also higher for the dental auxiliaries ( $p=0.05$ ) what can be explained by the longer existence of such occupation. Most subjects claimed being certificated on their field of work, and the dental auxiliaries reported taking more courses.

To become a CHW, the Brazilian Ministry of Health (*Ministério da Saúde - MS*) requires basic education, as it is defined by the law n° 10.507 which regulates the occupation<sup>16</sup>. A specific CHW certification course is available since 2004, though it is not mandatory, which may explain why some CHWs report not having taken any courses<sup>17,18</sup>. On the other hand, DAs or DHs must fully take a theoretical/practical course to be certified to work.

In the present paper, both categories claimed being part of in-service training, as well as taking time self-analyze their teamwork performance on the ESF environment.

The training includes preparation to work following guidelines that organize work and integrate the family health team members<sup>19</sup>. It is important that these workers undergo continuous training, as established by the guidelines of SUS. A properly prepared health worker can better fulfill their tasks in order to meet the needs brought about by the dynamism of problems<sup>20</sup>. Besides allowing for professional development, this continuous training is an important mechanism in the development of the concept of a team formed by workers in touch with the population – this trait is fundamental for the operation of the ESF<sup>21</sup>.

Regulation n° 1886/GM, created by the Ministry of Health requires the CHWs to receive in-service training, in a gradual and continuous manner, under the responsibility of their Instructor-Supervisor, considering the priorities identified on the area of

**Table 5.** Tasks performed on a clinical environment. 2010

Tasks performed on the clinical environment of the ESF Unit	Community Health Workers	Dental Auxiliaries	Bivariate analysis p
Aids professionals on a clinical setting			
Yes	33.6%	93.1%	p<0.001
No	66.4%	6.9%	
Performs clinical procedures			
Yes	9.2%	34.5%	p<0.001
No	90.8%	65.5%	
Performs disinfection and sterilization			
Yes	3.8%	93.1%	p<0.001
No	96.2%	6.9%	

work<sup>21</sup>. Regarding the DAs and DHs, the in-service training is important, given the ESF presents new challenges to these workers since they are no longer restricted to a clinical setting.

On the subject of taking time to self-analyze their work, the Ministry of Health has published policies aimed at the preparation and development for SUS. This document establishes that from the analyses of the teamwork, taking into account the knowledge and experience of the workers, it is possible to identify and craft strategies that tackle issues that emerge on a daily basis at health work<sup>22</sup>. The ongoing training composes fundamental strategies to the transformations of work, given it allows for critical analysis, experiences exchange and resolution of problems aimed at improving the work setting<sup>23,24</sup>. This ongoing education identified on the ESF environment may have, at least partially, contributed to the common feeling of readiness for the tasks required at SUS, this confidence has been noted on a large portion of both worker categories.

The awareness of the health conditions of the population living in the area of work as reporting the situation of the families under the care of the ESF to the team were tasks performed by the majority of the members from both groups, though being more commonly performed by the CHWs (p<0.001). As for the referral of people to clinical attention, this task was performed by both groups, with no relevant differences present (p>0.05).

The community health agent is the link between the health services user and the health care team, since the planning of the health care work is derived from what is reported to the CHWs by the population. The CHW acts as a social medium that translates the actual needs of the community to the health team and ensures that the group identity of the people under its responsibility are in harmony with the health activities performed by the health public service<sup>25</sup>. In this fashion, the CHW acknowledges the health situation of the community and is able to identify the families that require greater care by the ESF. Additionally, the CHW scouts problems of the area of work that are relevant to the health personnel and may require some kind of intervention, such as open sewage, places teeming with infections and contagious diseases, among others<sup>26</sup>.

On the present paper, most of the subjects perform home visitations, though on a smaller scale by the dental auxiliaries. This task is an important instrument of intervention utilized by the health times, since it allows for bonding with the family under care and favors the understanding on the dynamics of said family<sup>27</sup>. In this manner, and by understanding the family relations as a relevant aspect to the physical condition of the people<sup>28</sup>, the home visitation allows the professionals to plan their actions, by taking into consideration the lifestyle and the available resources of the families<sup>27</sup>.

In Brazil, the Ministry of Health has recognized home visitation as the main instrument of the CHWs<sup>12</sup>. Through it, the CHW identifies families that requires special care, performs tasks towards the integration of the health team and the population under its care and perform educational health initiatives. The health team must know the actuality of the families to optimize their work. Thus, the team must gather information that point to the main health needs of the population, performing a large scale diagnosis on the entire community, necessary for crafting a plan of action<sup>29</sup>. Therefore, the CHWs may increase the access to health care and allow for the adequate usage of health care resources, triage, detection and treatment of basic emergencies and contribution to an ongoing health assessment thanks to the local diagnosis of the community<sup>30</sup>.

According to regulation n° 648 from March 2006, among the roles of the CHW is the sign up of all the people in its area of work, the identification of family risk and the tutoring regarding how to use the available health care services. In this research, such tasks were more associated to the CHW category, though they were also detected among the tasks of the dental auxiliaries<sup>4</sup>.

The sign up of the families, performed during the home visitation by the CHW, provides a real understanding of the living conditions of the families that live in the area where the family health care team acts. When performing this task, the CHW raises the main health issues of the families. This contributes to a directed attention to the actual demands of the families regarding its common problems<sup>29</sup>.

The development of health awareness routines, health education and community mobility performances were detected on both categories, with no statistical difference. This result suggests that once integrated to the family health care team end up integrated to the community as well. And thus acquire new proficiencies and abilities, such as require the solution for community problems that affect the family health environment.

All these performances must be part of the daily routine of the family health care teams and are duties of every single team member<sup>7</sup>. Thereby, the population may be taught to detect challenges and provide tools to face them through the empowering of the people.

On regard to the activities on a clinical environment, this task was associated to the dental auxiliaries, as was the performance of clinical procedures and disinfection and sterilization of clinical instruments. An expected result, given this category is certified to provide health assistance. However, some CHWs (33.6%) were deviated from their original attributions by performing on clinical environment.

The present study has its limitations. Since it is based on collecting data through a questionnaire, there is a possibility of information/recall bias that may compromise the accuracy of the information provided by the research subjects.

## CONCLUSION

As for the characterization of workers, dental auxiliaries are all female, have higher average age, more years of working for

the public sector and most presented certification in their field of work.

Regarding the tasks performed on the ESF, despite the similarities in important tasks such as health conditions awareness and teamwork analysis, the categories presented contrasts in the family and clinical contexts. The dental assistant was associated to restricted tasks on the clinical environment, unlike the CHW, who is issued a greater amount of tasks on the family environment.

On the subject of differences, in none of the tasks there was lack of participation of the categories, however, the results of the collective performances towards education and community mobility for the dental auxiliaries demonstrated the need of greater participation from this category, since nearly half of these workers do not take part on these tasks. On the other hand, it also seems that it is necessary to evaluate the reasons for the lack of CHW involvement in tasks performed on a clinical environment, since the lack of certification in their field of work may have a negative impact on the quality of the health care provided.

The effective attendance of the dental auxiliaries on health conditions awareness, teamwork analysis, education and community mobility tasks demonstrate that, despite having specific roles on clinical environment, once integrated to the family health care team, these workers undergo a shift in their practice, working alongside the community and the families. Identifying the in-service training may have contributed to the perception of readiness to perform on the SUS and to the acquisition of proficiency and abilities needed for family health care.

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## CONFLICTS OF INTERESTS

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The authors declare no conflicts of interest.

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