

Chapter 17

Digital Inclusion of Health Workers in Goiás State: An Account of an Educational Initiative



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Abstract This chapter provides an account of the Community Health Workers' Digital Inclusion Project concerning the knowledge management and capacity building in their skills and attitudes for preventing, caring, and promoting health of individuals, families, and communities. Distance learning was the pedagogical-didactic approach adopted for the training of these health workers, building on the technological setting using the Moodle online platform. Results achieved so far suggest that participants are still alien to the universe of information and communication technologies, despite their mid-level of schooling and the scope of digital inclusion in Brazil. Transforming these workers into managers of information they acquire or generate is to promote social justice through technological inclusion as well as improve the quality of work they provide focused on improving population health. Initiatives like this one directly influence access to information and consequently assistance to users of the public health system in their areas. Participants' feedback recognized the merits of the ongoing project. Strategies of this nature should be adopted by municipal health managers especially given Brazil's complex economic, political, and sociocultural characteristics.

17.1 Introduction

Some affirm that digital inclusion in Brazil has been overcome.¹ We would instead say it has been minimized. It has not met the needs for information management and knowledge in a country so diverse in its political, economic, and sociocultural realms, with complex organizational processes of municipal health systems,

¹ Chapter 17 discusses a pioneering Digital Inclusion project in Brazil.

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especially those opting for primary healthcare, as the starting and circulating point of the organization of healthcare and services. Furthermore, digital inclusion also has not included Community Health Workers (CHWs) and family health strategies as the possible pathway in the processes of health-disease care, toward integrated networks, in a universal, decentralized, public, and quality health system. These options constitute the strategies in the organization and structuring of the Brazilian health system.

The Brazilian health system, namely, the unified health system (or SUS according to its Portuguese acronym) presupposes health as a social right. Thus, the Brazilian healthcare model should promote actions and unwavering health services, so its primary healthcare (PHC) was decided as the care coordinator. This means that PHC should monitor individuals, promote long-term care, and refer patients seeking health services to other levels of complexity and specialized care by coordinating care.

PHC is an alternative that transforms the rationale of health practices, based on family and household interventions (Ministry of Health, 2006). In PHC, the understanding of the illness-cure process (or health-disease process) is understood comprehensively and in a multicausal way, as well as seen as determined by the individual, family, social, and environmental factors. In this regard, the Brazilian health system, in implementing PHC as the coordinator of care to reach individuals considering their economic and social context, focuses on so-called family health teams consisting of a physician, nurse, nursing technician, and Community Health Workers (CHWs) who are individuals residing in the territory and are responsible for conducting home visits and monitoring individuals and families and for being the communication link of health needs in the area. This initiative is called the family health strategy.

In 2007, we started the Digital Inclusion Project of Community Health Workers in the states of the Brazilian Federation, because we understood that, in such a diverse and complex country, including professionals who first knock at health's door is urgent and necessary.

From the positive results achieved in this initiative and, above all, recognizing that these professionals could not stay on the sidelines of new technological revolutions, the state of Goiás saw us as preferential partners in the development of a strategic Digital Inclusion Project targeting CHWs in all the state's municipalities. In this regard, the Center for Public Health Studies, the Faculty of Health Sciences of the University of Brasília (UnB), and the State Health Secretariat of Goiás signed an agreement to develop the quality improvement project of Community Health Workers.

What is this all about? It is about a certain number of health workers from Brazil's central-west region who took online distance-learning modules, but who did not have the knowledge, skills, or attitudes to use these information and communication technologies (ICTs). Thus, in this chapter, we reflect on this initiative, as well as the sociodemographic characteristic and ICT use of these professionals, their difficulties, and how we worked together to help these health workers climb one step further toward digital and informational inclusion, so that they could be more successful in their service training.

However, we should recall that the Community Health Workers program created in 1991 is a strategy to promote health and improve the quality of life of individuals, families, and communities, each of whom are linked to a multi-professional team working in specific urban and rural areas (Ministry of Health 2009; Brazil 2011). Subsequently expanded and consolidated into the family health program, these efforts propose a new healthcare model, which improves healthy environments, protects people against health threats, and enables communities to increase their development capacities and opportunities (Mendonça et al. 2017).

By the end of 2017, Brazil had 257,872 Community Health Workers (CHWs). Of these, 8132 were located in the state of Goiás (Ministry of Health 2018).

17.2 *Capacita CHWS/CEWS*: Online Information and Knowledge

The online training course *Capacita*² for CHWs and Community Endemic Workers (CEWs) aims to build professionals' capacities to work together with their multi-professional teams, to improve the quality of their work in providing care, and to promote health for individuals and social groups at the household and community level. The course has a workload of 220 h and is carried out in Virtual Learning Environments through a distance-learning modality. It started in December 2016 and is expected to be completed by the end of 2018.

Eight hundred eighty-one workers enrolled in the first module of the first of 14 classes planned until the end of the project. The second and third class had 764 and 1700 enrolled, respectively. In total, the course had 3345 active participants. More than 11,000 workers are expected to complete the course.

The participants were selected by the State Health Secretariat of Goiás. An e-mail invitation was sent to them that contained a link to an electronic form with questions about their social, professional, and technological backgrounds. Let us have a look at some information about those who enrolled.

17.3 Profiles of Distance-learning Course Participants

In the social profile, we highlight "Gender," "Bearer of special needs," "Schooling," and "Household income." Of the 3345 enrolled in the first three groups, 2566 (76.7%) were female and 779 (23.3%) were male.

Sixty-three workers (1.9%) reported a disability. For these, in the questionnaire, the question included the type of disability, whether visual, intellectual/cognitive, or other.

² *Capacita* comes from the Portuguese word *capacitar* which means to build capacity, to train, or to enable.

Regarding schooling, prevalence of high school education (58.36%) between CHWs and CEWs was followed by college education (17.43%), incomplete college education (11.36%), incomplete secondary education (4.93%), complete elementary education (3.35%), incomplete elementary education (1.49%), and postgraduate studies (3.08%). This information provides evidence about the academic level of workers, mainly when it refers to the percentage of these with college-level degrees vis-à-vis those who do not.

Regarding household income, 97.7% of those enrolled reported earnings up to four minimum wages in Brazil, which corresponds to US\$ 1163 (as early 2018).

Concerning the professional profile, we highlight questions concerning the following topics: “Works as a CHW”; “Professional link with the municipality”; “Length of service as a CHW”; “Completed the professionalization course to work as a CHW”; “Participated in training courses to be a health worker”; and “Municipality of service”.

Of the total of 524 enrollees, only 4.4% had a formal work contract with the health secretariat. This fact shows an elevated rate of poor work relationships facing CHWs.

Regarding the length of service as a CHW, 27.1% of the enrollees had 9–11 years of service, 15.3% had 12–14 years, and 16.8% 15–18 years. This information demonstrates that they are experienced professionals, since 63.5% of the enrollees have 9 years or more of service.

Still in relation to participants’ professional profile, workers were consulted regarding the CHW professionalization course and whether they had completed job training lessons. As for the professionalization course, 17.8% said they did not do it, and with respect to training, 22.1% also said they did not do it. These results draw attention to the number of CHWs who did not complete the professionalization course or subsequent training courses. This may reveal a weakness in professional training, as well as the inadequate information and communication in the health management process that is attributed to and expected of them.

Lastly, enrollees also had a question about the municipality they work. A total of 80 municipalities were identified, with the largest number of CHWs from Anápolis (428 enrolled), Águas Lindas de Goiás (258), Aparecida de Goiânia (248), Luziânia (189), Rio Verde (174), and Planaltina de Goiás (131). The others had less than 100 enrollees per municipality.

17.4 The Technological Profile

In this session of the questionnaire, we asked about the respondents’ frequency of use of ICTs. The questions concerned access to technologies such as computers, tablets, and smartphones, all with Internet access. The frequency consisted of “1–3 times a week”, “4–6 times a week”, “daily,” and “I have no access.”

Regarding the use of computers, tablets, and smartphones, 24.9%, 83.1%, and 24% of enrollees said they did not have access, respectively. The data showed that

25% of the enrollees did not have access to the two types of widely used ICTs, a proportion that increased in regard to tablets. Also, in the case of Virtual Learning Environments course, this number becomes even more significant, since access to technologies is a fundamental prerequisite in the learning process.

Following questions about access to ICTs, the next one tried to identify the location of access. We observed that 90% of enrollees with access to the Internet do so at home or work.

To finalize the technological profile and the questionnaire, we sought to find out whether CHWs/CEWs knew about distance-learning platforms and, for those who said they did, whether they had already attended a distance-learning course. In the questionnaire, 43.8% said they knew about distance-learning platforms, and of those who said they did, 59.5% had already attended some distance-learning course through these platforms.

Considering the issue of access and lack of workers' knowledge about distance-learning platforms, the Laboratory of Education, Information and Communication in Health and Center for Public Health Studies/UnB, with the support of State Health Secretariat, scheduled digital inclusion workshops targeting CHWs and CEWs who are experiencing greater difficulties in accessing these technologies. This demand arose after evaluating data collected on student enrollment in the first class, where we observed that, in three municipalities, a large number of CHWs/CEWs said that they did not have access compared to the number of those enrolled in their location.

The municipalities that drew the most attention with this problem were Posse, with 38 workers of the 81 enrolled; São Miguel do Araguaia, with 29 of 58; Cavalcante, with 26 of 34; São Domingos, with 16 of 31; and São Simão, with 15 of 50. Therefore, with 48.8% stating that they did not know about distance-learning platforms, only the first class showed the need for workshops that enabled CHWs/CEWs to make use of ICTs, not only to follow the course but also to be able to include themselves in the virtual universe in a way that could consolidate access to information for absorbing and managing knowledge (Mendonça 2009; Mendonça et al. 2009). Given this reality, the training needs of these professionals became central for the course in understanding the role of the educator and goal of overcoming the challenges at hand (Mendonça 2007). Thus, we will describe the profile of the workshops that were conducted, as well as how these were put into practice.

17.5 The Participants' Profile in the Digital Inclusion Classes

The digital inclusion (DI) workshop is an 8-h workload practicum and theoretical activity to provide ICT skills to CHWs and CEWs who are not digitally experienced in the use of smartphones, notebooks, tablets, computers, and other devices. The theoretical content seeks to provide CHWs/CEWs the skills necessary to take the *Capacita* CHWs/CEWs training course.

Workshop participants who declared that they are not digitally included answered a new semi-structured questionnaire at the beginning of the lesson in which they reported their main difficulties regarding the use of ICTs. The analysis informed the elaboration of participants' profile for the workshops and directed the application of theoretical contents addressed during the group study sessions. The profile described below sought to identify which ICTs the workers had more familiarity with and ease of handling on a daily basis, whether for personal use or at work.

The digital inclusion workshop is aimed at professionals registered in the course platform, installed from the free Moodle software. However, not all those enrolled in the course participated in the workshop. The first activity was carried out in a municipality of Goiás state, and six other seminars took place in other municipalities throughout the state from August to November 2017.

By the end of December 2017, 524 professionals were included in the program, with the purpose of familiarizing themselves with the platform and later acting as local facilitators. The workshops' initiative aims to provide autonomy to participants either for social mobilization in their work processes or empowerment as citizens (Freire 2002; Toro and Werneck 2004).

The questionnaire contained 12 questions concerning which ICTs are most commonly used by CHWs, whether they had access to the Internet or some online activity (Facebook, Instagram, Twitter, blog, etc.), and finally the main difficulties they faced in accessing the Internet. The questions were based on the course's needs since it is a distance-learning course.

The participation of CHWs (364) was higher than CEWs (154), which is because there is a larger number of CHWs than CEWs in the Brazilian state of Goiás.

The questionnaire started by asking workers whether they used any ICT device, such as a computer, cellphone (smartphone), or tablet. In total, 476 questionnaires were analyzed, of which 82% (393) answered that they use one of the listed technologies, 12% (56) said they did not, and 6% (27) did not respond.

Most make use of some ICT device. When questioned about which devices are most commonly used, cellphones prevailed with 63% (277) of the respondents, followed by notebooks, with 14.5% (55), and tablets, with 7% (31).

The mainstreaming of smartphones results from the fact that cellphones are the most commonly used devices, which is due, among other things, to having more known and useful functions (CGI 2016).

In activities of this nature, it is ideal for the participant to dedicate about 1 h a day to the course, reading the available material, completing assignments, and consulting complementary references for greater mastery of the content. The difficulty in accessing the course may reflect the dropout rate (Silva 2016). To identify such difficulties, workers were asked to list the main difficulties they face when using the Internet. Many reported problems in typing, accessing a site, performing a search, and accessing e-mail, but safety was not an issue. This is related to the fear of damaging something; one participant stated: "We are all afraid to access programs and delete the rules."

Access to the Internet can be more straightforward if the user is already familiar with the tool. Many of them do activities online, but they do not realize that they are

using the Internet through social media, such as Facebook, Twitter, Instagram, blogs, and other programs, which are also connected to the Internet (Mendonça et al. 2009). So, we asked them if they did any activities online (blog, Twitter, Facebook, etc.) and, if so, what they were. Of the 370 agents who answered this question, 73% (271) do some type of activity on the Internet, and then we asked them which one. The most common uses were Facebook and the WhatsApp messaging application. Also included were Instagram, YouTube, e-mail, and LinkedIn.

In summary, the profile of the participants of in the DI workshops reveals that workers perceive themselves as digitally excluded although they own and use cell-phones and develop activities through social media. Also, the most significant issues refer to safety and fear of using ICTs.

Next, we shall describe the organizers' reflection and participant's feedback regarding the digital inclusion workshops. The goal in this report is that we can target and identify the potential of these sessions to increase workers' knowledge, disseminate understanding, and affect participants' perception. We also observe how their expertise in information management has advanced and how use of ICTs has improved their quality of life and work.

17.6 What Does This Experience Teach Us?

The face-to-face digital inclusion courses for CHWs were carried out from the enrollment questionnaire of the *Capacita* CHWs course, which at the time showed that 25% (837) of the workers were not experienced with digital technologies.

The first insight of the workshop organizers' group was that it was necessary to get to know the participants of the courses using ICTs. Although common sense points out that, ideally, everyone participating in the Virtual Learning Environment courses knows at a minimum how to handle and use the ICTs. The reality may be that the students want to join in distance-learning courses, but do not have sufficient knowledge to follow in the course, as was identified in the *Capacita* CHWs course.

We should then reflect on the following: will these digitally challenged professionals ever have the necessary requisite skills for entering the digital environment? Also, will they always be on the sidelines for skill training and professionalization training when they are in Virtual Learning Environment? Thus, the starting point chosen in *Capacita* CHWs was to provide these professionals the skills so that they could continue in the course.

The digital inclusion (DI) workshops generally took place on Saturdays in strategically located municipalities that would maximize the number of participants, lasted for 8 h, and consisted mainly of practical activities. In principle, these municipalities should have been in a location that would favor student travel to and from locations and have spaces with sufficient technological infrastructure to accommodate the largest number of participants. The size of the state of Goiás, located in the center-west region of Brazil, has a surface area of more than 340 thousand km², slightly larger than Finland, has a population estimated at 6.7 million inhabitants

(IBGE 2017), and consists of 246 municipalities grouped in 17 health regions. Regarding access to ICTs, Goiás state ranks higher than the means in relation to the percentage of households with access to the Internet, mobile phone, and computer. According to the 2016 PNADC – Access to Internet and Television and Ownership of Cellphone for Personal Use (IBGE 2016) – the state of Goiás has 71.8% of households with Internet access (compared to 69.3% in Brazil), 95.6% have cell-phones (Brazil 85.5%), and 46.7% have computers or tablets (Brazil 45.3%).

The DI training sessions included material about computing concepts, knowledge of computer parts and pieces, operating systems, software programs, basic operations in the digital graphics environment, text editors, browsers, and even the presentation of the Virtual Learning Environment platform where the DI course would be provided, helping them access the Internet for the first time. Course instructors adjusted content according to participants' level of knowledge. For example, in the municipality of Posse, where the first workshop was held, most of the workers had never used a computer and could not even switch it on. In Goianésia, one-third of the workers had never touched a computer, while the others already knew how to switch them on but felt insecure and unable to operate them.

The DI workshop revealed several realities. In all the locations, there were no problems related to participant attendance. Instead, some of the challenges concerned the limited availability of the physical spaces requested in some municipalities. Also, none of the seven locations had an infrastructure that covered the demand for workshops. Sites with the best conditions were in the following cities that had universities: Luziânia (Federal Institute of Goiás – Luziânia Campus), Anápolis (Evangelical University), and Aparecida de Goiânia (Federal Institute of Goiás – Aparecida Campus), all of which stood out for the number of operating computers with access to the Internet.

Once classes started, we observed that the primary challenge was physical, that is, getting people to just touch the computer. When we saw participants in the room, we noticed some disbelief and fear of approaching the devices in their faces. Gradually, with practical exercises, encouraging them and grabbing their hands to touch the mouse together, we got them to switch on the computers and start the proposed activities. This very moment was the first icebreaker: workers rejoiced at every folder of documents they created and sentence finished in the Word editor that began to make sense to them.

Workers that participated in the workshops were mostly in the C and D social classes,³ as well as in the 25–65 years age group, concentrated mainly in the 35–45 years age group. Most did not have a computer at home, and those who had one did not use the device, reporting that their children used it.

³IBGE, the federal government's census bureau, classifies social classes based on the official minimum monthly salary. At the time of this publication, the minimum monthly salary was R\$ 954, which is approximately US\$ 300. Therefore, who makes between two to four minimum salaries (i.e., about US\$ 600 to US\$ 1200 a month) would be in the D class, from 4 to 10 minimum salaries in class C, from 10 to 20 minimum salaries in class B, and above 20 salaries in class A.

The DI workshop is based on a constructivist educational model, in which the subject is active and jointly responsible for his/her learning⁷. At the outset, we noticed several situations in which people never had contact with the computer, while others who had access to technologies did not know how to use them but were very eager to learn. Many revealed insecurity for fear of breaking the machine or damaging the operational system, erasing something, or even destroying the computer. In turn, all the class exercises were explained, showing their importance and practical applicability, both for the completion of the course and in their current work, as well as to facilitate their personal life activities.

Therefore, the workshop moved from acquiring basic knowledge of how to operate the computer, editing texts, and accessing the Internet and later starting the DI course in the Moodle platform. Practical activities performed in the virtual learning platform included participation in discussion forums and sending files (the same ones they produced earlier on). We repeated, as many times as necessary, computer commands and how to complete them. We also distributed a guide manual, with all the necessary steps taught in the classroom and with other teachings on basic computer science for everyday life.

Finally, CHWs were encouraged to become active and intuitively search for new functionalities on the teaching platform and the computer. We realized that the most significant challenge was not teaching them in the few practical hours everything they could possibly accomplish using a computer but to induce them to critically recognize themselves as computer operators. The exchange between classroom practice and the online functions in participants' work and personal activities contributed, in this regard, toward improving the session's results, not only for online learning but also for applying it to their jobs.

In this context, DI actions are of paramount importance for individuals. Although pre-workshop questionnaires showed that 82% use smartphones with Internet access and social media activities, they did not consider themselves to be part of the digitally included. A cellphone is currently a device for social inclusion, and its users are often unaware of what they can accomplish with them beyond ordinary activities.

The DI workshops were not and are not only for these workers a lesson but also an active space of self-knowledge and trust since these classes allow them to begin the process of overcoming their fears and barriers vis-à-vis of what is new and novel that stems from technological progress. The fear of damaging or erasing something, the feeling of inability, as well as insecurity are gradually replaced by "I can," "I am now even going to buy a computer," "I'll show my son that I already know how to use the computer," and "I will now study again all there is in the manual so that I don't forget."

In spite of the several adverse settings in this experience, such as the short period for digital inclusion workshops, rooms with obsolete physical capacity, and inadequate access to the Internet, initiatives such as these are of paramount importance to give new meaning to the role of education. And here we come to the main highlight of our experience – educating is a living process that concerns the feasibility of the other's learning process, learning how to teach and giving new meaning to the content

studied (Vasconcelos 2010; Zitkoski 2006). The student will only be included in this process if this transformation has meaning in his/her life: it is not just about accessing information but about being the manager of information (Demo 2005).

Thus, the knowledge consolidated in these workshops values the use of technologies in workers' everyday lives. They built, with the group of workshop organizers, possible ways of implementing these technologies in their work. Making these subjects managers of their information contributes to the promotion of social justice.

17.7 Evaluating the Processes

Participants were given the option to evaluate the course through a semi-structured interview and a questionnaire at the end of the class.

Students could rate classes as Very Good, Good, Fair, Bad, or Very Bad. In general, the classes received positive evaluations from 404 participants who answered the assessment, and 76% (307) of the participants rated classes as Very Good, 21% (83) Good, 2% (10) Fair, and only 1% (4) Bad or Very Bad.

The first evaluation point covers what the course meant to participants and what their expectations were at the outset. The main takeaway was that the course had exceeded expectations. They were surprised with the knowledge they acquired and their advances in the workload provided (8 h, carried out in a single day), as highlighted in the section:

[...] I arrived at this municipality 14 years ago. Participating in this course as I see it is very gratifying and vital. I'm enjoying it and am absolutely certain that all my friends are also satisfied. This course should have been given to us a long time ago. I believe so, also because I was kind of inexperienced with this stuff and for me, today, incredibly, these little minutes and hours will be very important for us who are in the working class. (Interview 7)

Another relevant aspect is the fact that workers, while having on average 9 years as employees of the Municipal Health Secretariat, had no previous training in the use and access of ICTs. This showed us two participants' wishes: the first concerns the need for complementary training, in particular, incorporating themes related to the use of health technologies; and the second refers to work computerization and replacing paper with technological devices, as can be seen in the following account:

This was excellent news to me; it was fascinating because I have been a Community Health Worker for 23 years. In all my years as a Community Health Worker, I have never seen anything like this so focused on helping people even at work. [...] I live in a rural area, 100 km from here and I came exactly because I found it interesting. It is going to contribute a lot. I still see myself as a CHW working without paper, because, you know, the world is headed toward eliminating as much paper as possible. And now, with this course, this expectation increases even further, because that's what we've been waiting for. (Interview 8)

The previous report corresponds to another question: what are the classes' contributions to the participant? They emphasized that learning added meaning to their lives, both for improving their performance at work and in their personal lives. The

main positive aspects mentioned by participants are computer use, Internet browsing, and the use of application tools in general. It is noteworthy that they felt they were unable to learn to use ICTs and felt scared. Thus, another positive aspect was the class's contribution toward instilling self-confidence and new skills.

The interviews also highlight the didactics used by teachers. According to the participants, workshop organizers acted transparently and patiently, respecting the learning pace of each of the groups:

When I came to this course, I was “unmotivated”. Because all the other courses we did, they really did not yield what we expected. And this course now, today, is captivating, you know? It stimulates people to complete the course, to know how it is going to be. The class is very dynamic...I believe it will be very interesting, mainly because, from what I saw, from the colleagues there, it made them feel like learning how to use computers. Many said [...] “I do not like to fiddle with a computer, with this machine”, and now that it works, I want to have one now. As soon as class began, the staff were already very interested. I think it really is “stimulating”. [...] In the end, everyone will benefit from it. It is worth it. (Interview 12)

This feedback highlights that DI initiatives are still required today, despite Silva (2016) already pointing out that half of the Brazilian households have access to the Internet, representing 32.3 million households in the country. The last ICT Households Survey, conducted in 2015 by the Internet Steering Committee in Brazil (CGI.br), included 67,038,766 households. The survey provides evidence that, in the center-west region of Brazil, where Goiás is located, only 48% of households have Internet access, ranking third after Brazil's south and southeast regions. We understand that access to information through the use of ICTs remains a challenge for the Brazilian population (CGI 2016).

In addition to feeling incapable, as mentioned in the previous account, workers considered themselves displaced by generational differences for this type of learning, affirming that a “computer is a young person's thing.” At the end of the day, there was a change in their discourse, which showed that the knowledge they acquired motivated them. One interviewer stated: “I saw that it is never late to learn” (Interview 17). It is, therefore, essential for health educators to realize that digital inclusion initiatives of currently active professionals are of paramount importance for improving working conditions and quality of life.

Regarding the negative points, the primary factor is the class workload. According to students, the course should be even longer. Also, the infrastructure was also a displeasing issue to participants, because, in some municipalities, students worked in pairs sharing the same computer, which, according to them, impaired learning and took a little more time to accomplish the assigned tasks.

17.8 The Roads Ahead: The Task

The commitment of the Brazilian health system toward achieving a decentralized, comprehensive, and universal public health system necessarily furthers the democratization of health. Thus, it strengthens and increases the potential of CHWs and

primary healthcare, as an organizer and coordinator of local health systems, in the provision of healthcare that is affectionate, binding, and circumscribed to the real health needs of individuals, families, and communities who are then able to assume responsibility in health prevention and promotion⁴ in their living, work, and life environments. Configuring access to health services, according to Sousa (2007), establishes connections between individuals, families and communities, managers, and family health program teams permeated through social bonds and co-responsibility. It is through this permanent exercise of creating opportunities and capabilities among subjects in the processes of caring for health-illness-death that leads to expressions of respect, autonomy, and participation.

Making these people managers of their own information, whether acquired or produced, is to promote social justice through technological inclusion, as well as to subsidize improvements in the quality of their work. Because they are in direct contact with the population and because they are residents of their territory, these individuals become vital players in community health promotion. Therefore, initiatives such as these have a direct influence on access to information and, consequently, caring for SUS users in the areas under their responsibility. Training these individuals in ICTs sustains a communication model that promotes the health of the population and strengthens Brazil's healthcare model.

Digital inclusion initiatives for these individuals are, therefore, necessary actions. The gains from technological advances are immeasurable, especially as regard to preventing injuries and recovery of individual health. Still, the benefits are not any less when we refer to health promotion of individuals and the training of professionals to work together along these fronts in which technology-mediated education is highlighted.

However, it is necessary to make this model of education feasible. In addition to offering technology, we need to know how to use it. Technologies without meaning are just devices that are underutilized, so we need to make them palpable, usable, and useful.

Brazil is a country of continental dimensions and marked by inequalities across regions, levels of education, and access information. Initiatives such as DI workshops take on meaning and importance in the current context and, therefore, as a way of promoting knowledge management and multiplying know-how.

During the preparation of this chapter, the evaluation commission of the Innovation in Education Laboratory of the Brazilian Ministry of Health and the Pan American Health Organization (PAHO) selected our project out of the 251 applicants in the Permanent Education in Health. We desire that this experience is recognized thanks to the results it has achieved, since its objective is not only to facilitate digital inclusion but also to promote the autonomy of CHWs in their work, overall through the development of continuous educational projects to improve their skills. We also hope that this experience transforms these workers into educators and health promoters in their community, thus contributing toward healthy environments.

⁴Chapter 19 addresses the theme of ICTs and Health Promotion.

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