

ORIGINAL ARTICLE

COLLABORATIVE INTERPROFESSIONAL PRACTICE BETWEEN PRIMARY HEALTHCARE PROFESSIONALS AND RESIDENTS

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Highlights:

- (1) CIP provides more coordinated, focused, and effective care in PHC.
- (2) CIP breaks with the biomedical model, making the PHC approach comprehensive.
- (3) CIP strengthens care in healthcare services.

ABSTRACT

This research seeks to understand experiences of Collaborative Interprofessional Practice from the perspective of primary health care professionals and residents. This qualitative study involved 12 healthcare professionals and residents, including residents with at least three months of service and professionals with more than six months of service. Data collection used semi-structured interviews, lasting an average of 25 minutes. After transcribing the recordings, the statements were organized into topics. It was revealed that understanding Collaborative Interprofessional Practice must be based on interactions with professionals to serve several areas of the healthcare universe. Service experiences and strengthening of the topic permeate numerous specific situations in the studied service, but the collaborative act strengthens care. Professionals and residents understand that Collaborative Interprofessional Practice is essential for strengthening healthcare.

Keywords: interprofessional education; primary health care; internship and residency.

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INTRODUCTION

Collaborative interprofessional practice (CIP) is recognized as essential for the development of high-quality healthcare. The World Health Organization recognizes that this practice should involve the participation of various healthcare professions in addressing the several dimensions of the healthcare process within the context of primary healthcare (PHC)¹.

International and national evidence suggests that teams should be encouraged to incorporate practice as a strategic axis to consolidate care. By involving teams of diverse professionals, including general practitioners, nurses, and other healthcare professionals, care is strengthened, fostering interprofessional collaboration and subsequent improvements in care for needs requiring primary and community care. CIP in the PHC context is notable for its implementation challenges. These challenges stem from less defined and structured boundaries compared to other health sector¹⁻³.

In the Brazilian reality, plurality is revealed in the different regions of the country, with complex differences and several health needs for their populations, with even greater aggravations due to the emergence of private initiative and mercantilist interests, especially precariousness in training and qualification in daily care⁴. PHC is highlighted as a potential to reduce barriers and close gaps in healthcare services, since it organizes and orders care, being recommended worldwide as the preferred option for healthcare⁵. These have a care team closely linked to population coverage, in addition to organizing teamwork and guiding care in territories⁶.

Thus, ensuring access to healthcare through clinical decisions and access regulation processes seeks to expand clinical and care management, given the challenges of addressing health inequalities and inequities in Brazil. In recent decades, new arrangements and models for training and developing health practices have emerged in Brazil⁷. Higher education institutions are increasingly seeking to promote in-service learning experiences, given the reality and challenges of the Brazilian Unified Health System (In Portuguese, *Sistema Único de Saúde* – SUS)⁴.

Multiprofessional Health Residency Programs (MHRPs) seek to enhance and develop lato sensu graduate education within the SUS, covering a variety of areas. These programs are designed and focused on training tailored to the population's needs, focusing on the SUS principles and guidelines and the Brazilian National Policy for Continuing Education in Health⁵. Therefore, service training and organization is a factor that influences the care offered to the population, and ensuring practices that follow the SUS precepts is a complex process that requires the coordination of work methods. Therefore, CIP is seen as an approach to overcoming work fragmentation and individualization among different professional categories⁸⁻⁹.

When well implemented, interprofessional collaboration in PHC aims to break the logic of hierarchical relationships in the workplace and, above all, increase the resolution of several demands that arise in the primary healthcare axis. It is important to emphasize that this approach values constant communication in decision-making processes, ensuring synergy among the team members' diverse knowledge and skills⁸⁻⁹.

The Canadian Interprofessional Health Collaborative establishes six domains and competencies necessary to achieve CIP in healthcare services: team communication; relationship-focused care/services; role clarification and negotiation; team functioning; team differences and disagreements; and collaborative leadership¹⁰. National and international experiences indicate that CIP, when implemented in PHC, enhances good healthcare practices in light of the gaps and needs that care provision faces in Brazil and around the world¹¹⁻¹⁴.

Therefore, the question is: What are the PHC professionals' and residents' perceptions regarding the concept and experiences related to CIP in PHC? Therefore, the objective was to understand CIP experiences from PHC professionals' and residents' perspective.

METHODS

This research is characterized as a qualitative study reported according to the CONsolidated criteria for REporting Qualitative research guideline. The theoretical framework adopted focuses on hermeneutics, seeking to understand the concept and experiences of collaborative work among PHC professionals and residents, who experience their subjectivities and sociohistorical processes in relation to the phenomenon studied¹⁵⁻¹⁶.

The research was conducted at a PHC unit in the metropolitan region of Fortaleza, Ceará. The unit is affiliated with the Municipality of Caucaia, Ceará, and has 73 professionals and workers registered to provide healthcare. Services include immunization, prenatal care, childbirth, labor, occupational health, home care, telehealth, tobacco control, and comprehensive leprosy care. The PHC unit also has committees for disease reporting, epidemiological investigation, and zoonosis and vector control. As of 2018, this unit was incorporated into the continuing education process, and began to accommodate and receive professionals from medical residency programs, both uniprofessional and multiprofessional in health.

Participants were two groups, comprising all residents and professionals from the health unit. The first group consisted of seven resident professionals with an emphasis on PHC, and the second group consisted of five professionals from the Family Health teams.

The inclusion criteria adopted for residents focused on a minimum of three months of immersion in the multidisciplinary residency, and for PHC professionals, those with more than six months of experience in the service and who had worked together with residents were selected. The exclusion criteria for both groups included professionals on vacation and/or away from work.

The field research was conducted from July to November 2021, using a semi-structured interview. The data collection process initially involved the researcher's immersion in the respondents' work routines, enabling records and observations inherent to the work processes and creating a connection with the context under study¹⁵.

It is noteworthy that data collection was conducted by two graduate students, both with teaching and research experience in the field of public health. The semi-structured interview developed guiding questions that addressed the following: What does interprofessional collaborative work mean to you? How important is collaborative work, and how do you see collaborative interprofessional work in the daily routine of this healthcare service? Subsequently, collection material was discussed by the study researchers, who also underwent training with a simulated interview to consolidate the material, safely coordinate the process, and guide the collection toward the study objective.

At the beginning of each meeting, the study's method, objectives, and researchers were explained, with questions clarified, and participants signed an Informed Consent Form. The interviews were recorded, lasting an average of 25 minutes. Afterward, the recordings were transcribed without the use of software for organization. Participants were guided through the steps of reading, rereading, ordering, classification, and interpretation. The final presentation was thematic, anchored in hermeneutics¹⁵⁻¹⁶ and presented in two topics. To mitigate the risk of embarrassment for study participants, all data collection took place in a quiet location and in private. To protect interviewees' identities, coding was adopted based on the sequence of interviews, the initial training period, and group membership (e.g., M1 – Professional... M1 – Resident...).

The research followed the ethical and legal principles of Resolution 510/2016, and was therefore submitted to the Research Ethics Committee through the Certificate of Presentation for Ethical Appreciation 47537121.5.0000.5037 and approved under Opinion 4.833.526/2021.

RESULTS

From data analysis, two topics emerged: Understanding Collaborative Interprofessional Practice; and Service experiences and strengthening Collaborative Interprofessional Practice.

Understanding Collaborative Interprofessional Practice

Participants describe CIP as the implementation of health practices that involve interaction between two or more professionals from different categories, requiring distinct health areas for the care offered in PHC. The audience recognizes that CIP provides coordinated health planning and care, with a person-centered focus on resolving the health-disease process, as well as support for all involved in this care context:

When professionals from different areas of health come together to initiate treatment or plan treatment for a particular patient or population (M1 – Professional).

When you look for another professional who has knowledge that is not specific to their area of training so that they can contribute to the care process of that patient in some way to collaborate with the care process of that patient (E1 – Professional).

It's taking the focus away from just one professional, it's distributing it to the team as a whole (M1 – Resident).

Professionals and residents recognize that CIP also seeks to complement knowledge and bridge gaps among health training. User- and/or population-centered care involves several knowledge, skills, and care practices, especially in the PHC sphere, as it seeks comprehensive care and such collaboration facilitates the consolidation of this.

Interprofessional collaboration is precisely about identifying that no one knows everything, that knowledge complements each other, especially in the Family Health Strategy (E1 – Professional).

Interprofessional collaborative practice deconstructs the idea of "being a doctor" a little more. When we begin to have the opportunity to learn about other areas, we begin to realize that we alone are not enough; we need other professionals, everything (M2 – Resident).

Interprofessional collaborative work is when we are able to aggregate several categories (N1 – Resident).

In light of this, professionals recognize that CIP breaks with the biomedical model, making the approach to patients centralized and comprehensive, given that several professions do not operate in isolation. It is noteworthy that when detecting something that is not inherent to the exclusive care of a professional area, action based on CIP underpins guidance and immediately improves the possibility of referral to another professional, thus facilitating care and comprehensiveness in PHC.

Understanding that our patient isn't just a specific part, they're a whole, which is health, it's a whole, it's not just about me. So being able to work collaboratively with other professionals means I can work better, being able to call on that professional, these are important additions (F1 – Resident).

You detect something that isn't in your area, but you give the patient guidance to follow, and speak with another professional to facilitate this care (D1 – Professional).

The understanding of professionals and residents recognizes that interprofessional practice is fundamental to the strategies that are developed in PHC settings, recognizing that care passes through the collaborative spectrum and with multiple health training, with intersections with intersectorality, mechanisms that strengthen the work.

A health worker came to ask for help with patient guidance, wanting to know when she could come in. Thus, interprofessional work is the foundation of the primary care program (D1 – Professional).

The essence of PHC care involves collaborative care, intersectoral collaboration, and several professionals, working within primary care (E1 – Professional).

Participants recognize that interprofessional work goes beyond the structural spheres of PHC by recognizing that specific consultations can be an offer of healthcare, but the population lacks several areas of knowledge to guarantee comprehensive care, involving other social actors:

Interprofessional work, because we don't see people needing one thing at a time like this, they need a consultation with this professional; in this case, interprofessional collaboration is there with their teacher, there at school, the child is not learning well, is having some degree of difficulty, the teacher gets involved in this work (M2 – Professional).

Areas of different knowledge, working together, interacting to offer this more comprehensive care, to meet this team need, to offer this comprehensive care, and to talk, interact so that this care moves forward (E1 – Professional).

Service experiences and strengthening Collaborative Interprofessional Practice

Experiences in PHC services encompass numerous situations in which CIP primarily strengthens user-centered care. Professionals and residents recognize that in clinical situations, CIP plays a crucial role in referring the user to another PHC professional, especially when communication and referral to the correct professional occur.

Sometimes a patient arrives with decompensated hypertension or diabetes, and we refer them right away during the consultation and get feedback. Because we tell the professional, we're referring them because of this, and then they come back and get feedback (D1 – Professional).

Interprofessional care is an excellent business, because I couldn't have resolved something alone, it was a moment when I saw another allied professional who was able to completely unravel the story (M1 – Professional).

Knowing a little about how each profession sees it, also knowing a little about what it does, brings autonomy, more clarity, helps to solve some things better (P1 – Resident).

In this context, when the professional adopts a comprehensive approach to the importance of CIP for PHC flows and the user's real demands, it supports the correct referral to other areas of knowledge, thus generating guidance, programming and scheduling according to users' needs, thus strengthening and reducing discontinuity of care.

They refer a patient to a physical therapist and immediately determine: this patient will have 10 sessions. I'm not the one who makes the determination. That's why other professions exist, to support us, and recognizing this strengthens care (M2 – Resident).

In PHC, our nursing team is responsible for identifying, making this happen, guiding, referring appropriately, scheduling, and scheduling (E1 – Professional).

CIP is clearly understood when seeking shared care, whether in the search for a second opinion on care, or even in the preparation of schedules and home visits in PHC.

Sharing care would be ideal if we could get at least a second opinion for every patient, someone else there to be there thinking about the patient's care (E2 – Professional).

If there's a relationship among the team, if there's communication among them, the patient will have a better outcome, because professionals communicate with each other. When there's communication, when there's this discussion, we can achieve a better outcome (N1 – Resident).

What day is this patient scheduled for? What's their schedule? Someone needs a visit. Let's work together to make it happen (E1 – Professional).

Experience shows that CIP is recognized as a proposal for strengthening PHC care, but it also strengthens other healthcare services. It is worth highlighting that service experiences based on CIP benefit not only users, but everyone, especially healthcare professionals who have other connections to reduce feelings of loneliness or doubts and advance health resolution.

I think it's more cohesive if the team works this way, the unit as a whole will function better. We'll see better patient care, as well as better health at the clinic (M1 – Resident).

These days, when I'm alone in my private practice, I sometimes look at certain situations and think, "I need a second opinion, I need the PHC team" (D1 – Professional).

It's not only good for the person being treated, but it's also good for us as professionals, as you're not alone, as the feeling of professional loneliness is very bad (M2 – Professional).

DISCUSSION

Despite the concrete understanding of the necessary CIP-based training to strengthen PHC care, there is still a long way to go to overcome the health challenges facing Brazil and the world. This is especially true when services that address health problems with multifactorial causes require professionals to incorporate health actions and practices based on the pillars of interprofessional collaboration into their work routines¹⁷.

It is worth noting that, in understanding the term interprofessional collaboration, it was evident that participants understand the importance of teamwork, thus enhancing attitudes and actions that reinforce collaborative skills with a focus on the user, the professional and the community. The development of work strategies based on CIP ensures the perspective and contribution of each professional on the team, focusing on users' and other PHC stakeholders' health needs. In this regard, the actions and perspectives of each professional reduce the complexity of care, as this constitutes care focused on comprehensive care, acting in a way that strengthens communication and horizontal relationships¹⁸.

Professionals and residents emphasize that CIP employs a dynamic in which everyone works together to recognize knowledge and roles. This allows for collectively setting goals for healthcare planning and positively influencing the care provided. Therefore, these practices result in reduced healthcare costs and improved care delivery¹⁹⁻²⁰.

It is observed that participants demonstrated knowledge of the concept of interprofessionality. However, interprofessional practice in the healthcare service still suffers from obstacles to be overcome, especially when the understanding of the concept and the experiences often occur for a centralization of the configurations of multiprofessional work.

In this regard, MHRPs have achieved their main objective, which is to meet the needs of redirecting human resources for the SUS, guided by the Continuing Health Education Policy, thus strengthening the Brazilian National Primary Care Policy transversally, given the need for human resource training. Thus, we emphasized that these programs are important professional training instruments, distinguished by their proposal for in-service training, as well as a reduction in health inequity in Brazil, from the perspective of health access²¹⁻²².

The presence of multidisciplinary health residencies in healthcare services has enabled the creation of spaces for shared theoretical and practical learning, with a positive impact on overcoming fragmented professional practices in healthcare processes²³. Residency programs, among their potential, aim to strengthen teamwork with a focus on the exchange of knowledge among the different professionals in the service. This interaction allows all professionals to be in continuous training²⁴.

Researchers emphasize that students entering healthcare training, such as one at Atlantic Canadian University, are influenced by issues related to leadership, prestige, and autonomy when choosing different career paths. They recognize the existence of stereotypes regarding healthcare professions and their own choices. The study provides insights into promoting CIP-centered training, recognizing that knowledge production is necessary to foster early introduction for future healthcare professionals²⁵.

Other experiences in Brazil, Germany and Spain show that in educational programs, basic mastery of interprofessional education is necessary to achieve goals and improve health indicators, especially by strengthening communication and cooperation among PHC teams⁵. This example of interprofessional learning is facilitated by group development, case discussions, and problem situations, where interprofessional immersion in communities becomes a strengthening factor for specific geographic areas, thus strengthening care and expanding access to healthcare²⁵.

Thus, the services and spaces where residency activities take place undergo transformations proposed by this training model. It is considered an important tool for continuing education for workers, while also fostering questioning and reflection on the practice developed in practical settings. Henceforth, residency enhances contact between PHC professionals and residents, fostering their participation in prevention and health promotion actions, in line with the findings of the study reported here²⁶.

The limitations of this study are primarily due to the fact that it was conducted in only one primary care unit as well as in a metropolitan region of the state of Ceará. It is also noteworthy that data collection occurred without the material being returned to participants.

FINAL CONSIDERATIONS

PHC professionals and residents understand that CIP is essential for strengthening healthcare in different contexts, fostering shared responsibilities and problem-solving capabilities. It is important to emphasize that the presence of residency in this setting enhances interprofessional care, providing theoretical and practical tools for interprofessional work and comprehensive healthcare.

REFERENCES

- ¹ Esperat MC, Hust C, Song H, Garcia M, McMurry LJ. Interprofessional Collaborative Practice: management of chronic disease and mental health issues in primary care. *Public Health Reports*. 2023;138(1):29-35. DOI: <https://doi.org/10.1177/00333549231155469>
- ² Davidson AR, Kelly J, Ball L, Morgan M, Reidlinger DP. What do patients experience? Interprofessional collaborative practice for chronic conditions in primary care: an integrative review. *BMC Prim Care*. 2022;23(8):1-12. DOI: <https://doi.org/10.1186/s12875-021-01595-6>
- ³ Mendes SC, Silva JWM, Teixeira MMS, Lopes MSV. Nursing actions in Primary Health Care to lesbian and bisexual women. *Rev Rene*. 2023;24:83147. DOI: <https://doi.org/10.15253/2175-6783.20232483147>
- ⁴ Pinto TR, Cyrino EG. Multiprofessional Health Residency Programs in the formation of priority care networks. *Interface, Botucatu*. 2022;26:e200770. DOI: <https://doi.org/10.1590/interface.200770>
- ⁵ Heumann M, Röhsch G, Zabaleta-Del-Olmo E, Toso BRGO, Giovanella L, Hämel K. Barriers to and enablers of the promotion of patient and family participation in primary healthcare nursing in Brazil, Germany and Spain: a qualitative study. *Health Expect*. 2023;1-13. DOI: <https://doi.org/10.1111/hex.13843>
- ⁶ Giovanella L, Martufi V, Mendoza DCR, Mendonça MHM, Bousquat A, Aquino R, et al. A contribuição da Atenção Primária à Saúde na rede SUS de enfrentamento à Covid-19. *Saúde Debate*. 2020;44(4):161-176. DOI: <https://doi.org/10.1590/0103-11042020E410>
- ⁷ Sousa A, Shimizu HE. How Brazilians access Primary Health Care: evolution and adversities in recent times (2012-2018). *Ciênc Saúde Colet*. 2021;26(8):2981-2995. DOI: [10.1590/1413-81232021268.08972020](https://doi.org/10.1590/1413-81232021268.08972020)

- ⁸ Ceccim RB. Connections and frontiers of interprofessionality: form and training. *Interface*, Botucatu. 2018;22(2):1739-1749. DOI: <https://doi.org/10.1590/1807-57622018.0477>
- ⁹ Ferraz CMLC, Vilela GS, Dionízio ACS, Caram CS, Rezende LC, Brito MJM. Collaborative practice in the family health strategy: expressions, possibilities and challenges for the production of care. *Rev Min Enferm*. 2022;26:e-145. DOI: <https://doi.org/10.35699/2316-9389.2022.40294>
- ¹⁰ Smilski A, Parrott M. Interprofessional competency frameworks in education. *Med Ed Publish*. 2019;8(1):56. DOI: <https://doi.org/10.15694/mep.2019.000056.1>
- ¹¹ Maciel JAC, Castro-Silva II, Dias MSA, Vasconcelos MIO. Does permanent health education walk alone towards interprofessionalism? A dentist's perspective. *ABCS Health Sci*. 2022;47:e022205. DOI: <https://doi.org/10.7322/abcs.hs.2020175.1624>
- ¹² Miselis HH, Zawacki S, White S, Yinusa-Nyahkoon L, Mostow C, Furlong J, et al. Interprofessional education in the clinical learning environment: a mixed-methods evaluation of a longitudinal experience in the primary care setting. *J Interprof Care*. 2022;36(6):845-855. DOI: <https://doi.org/10.1080/13561820.2022.2025768>
- ¹³ Viklund EWE, Nordmyr J, Häggblom-Kronlöf G, Forsman A. Health promotion practice among older persons: a nordic multi-professional focus group study exploring what it is and how it could be achieved. *J Appl Gerontol*. 2022;41(7):1665-1674. DOI: <https://doi.org/10.1177/07334648221082021>
- ¹⁴ Normandin C, Hayes V, Cyr P, Schirmer J. Implementation and impact of an interprofessional education curriculum on medical, pharmacy, and social work students' attitudes, perceptions, and self-assessed teamwork skills. *J Interprof Care*. 2023;6:1-5. Doi: <https://doi.org/10.1080/13561820.2023.2169260>
- ¹⁵ Minayo MCS. O desafio do conhecimento: pesquisa qualitativa em saúde. São Paulo: Hucitec; 2014.
- ¹⁶ Gadamer HG. Verdade e método. Petrópolis: Vozes; 1999.
- ¹⁷ Alcin CB, Pinheiro AKB. The challenge of healthcare for vulnerable and marginalized populations [editorial]. *Rev Rene*. 2023;24:e83107. DOI: <https://doi.org/10.15253/2175-6783.20232483107>
- ¹⁸ Gould KA, Barton A, Day K. The Interprofessional Showcase: Evaluating an event to increase professional understanding and collaboration. *J Effective Teaching Higher Educ*. 2018;1(1):2-10. DOI: <https://doi.org/10.36021/jethe.v1i1.13>
- ¹⁹ Sarmiento LF, França T, Medeiros KR, Santos MR, Ney MS. A distribuição regional da oferta de formação na modalidade residência multiprofissional em saúde. *Saúde Debate*. 2017;41(113):415-424. DOI: <https://doi.org/10.3109/13561820.2014.906391>
- ²⁰ Edwards ST, Hooker ER, Brienza R, O'Brien B, Kim H, Gilman S, et al. Association of a multisite interprofessional education initiative with quality of primary care. *Jama Netw Open*. 2019;2(11):e1915943. DOI: 10.1001/jamanetworkopen.2019.15943
- ²¹ Peduzzi M, Agreli HF. Teamwork and collaborative practice in Primary Health Care. *Interface*, Botucatu. 2018;22(2):1525-1534. DOI: <https://doi.org/10.1590/1807-57622017.0827>
- ²² Araújo HPA, Santos LC, Domingos TS, Alencar RA. Multiprofessional family health residency as a setting for education and interprofessional practices. *Rev Latino-Am Enfermagem*. 2021;29:e3450. DOI: <https://doi.org/10.1590/1518-8345.4484.3450>
- ²³ Flor TBM, Cirilo ET, Lima RRT, Sette-de-Souza PH, Noro LRA. Training in the Multiprofessional Residency in Primary Care: systematic review of the literature. *Cienc Saúde Coletiva*. 2022;27:921-936. DOI: <https://doi.org/10.1590/1413-81232022273.04092021>
- ²⁴ Flor TBM, Miranda NM, Sette-de-Souza PH, Noro LRA. Analysis of professional training in Multiprofessional Health Residency Programs in Brazil from the perspective of residents. *Ciênc Saúde Colet*. 2023;28(1):281-290. DOI: <https://doi.org/10.1590/1413-81232023281.11292022>
- ²⁵ Sheri L, Price MS, Little V, Almost J, Andrews C, Davies R, et al. Pre-entry perceptions of students entering five health professions: implications for interprofessional education and collaboration. *J Interprof Care*. 2021;35(1):83-91. DOI: <https://doi.org/10.1080/13561820.2019.1702514>
- ²⁶ Azzam M, Girard MA, Andrews C, Bilinski H, Connelly DM, Gilbert JK, et al. Accreditation as a driver of interprofessional education: the Canadian experience. *Hum Resour Health*. 2022;20(1):77. DOI: <https://doi.org/10.1186/s12960-022-00775-4>

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