Health residency programs in a university hospital: a potent training setting for interprofessional collaborative practice

Residências em saúde em hospital universitário: cenário potente de formação para a prática colaborativa interprofissional (resumo: p. 17)

Residencias sanitarias en un hospital universitario: un potente escenario de formación para la práctica colaborativa interprofesional (resumen: p. 17)

Vanessa Moreno Blanco
<moreno.van@gmail.com>
continue on page 12

Abstract

The aim of this study was to explore residents’ experiences of interprofessional collaborative practice (ICP) in a university hospital (UH) in São Paulo. We conducted a qualitative study with 14 residents undertaking uniprofessional and multiprofessional residency programs. The data were collected using critical incident technique-based semi-structured interviews and analyzed using thematic analysis as proposed by Bardin. The UH was shown to be a potent training setting for ICP, promoting interactions between professionals from a range of areas and with varying levels of qualification. The quality of interactions between workers, residents and patients and their families was a determining factor for the development of ICP. Barriers to ICP included lack of organizational structure, excessive workload, weaknesses in the provision of permanent training in ICP and the predominance of the biomedical model of health care. Collaborative actions mediated by informal communication were the most common mechanism used for providing shared consultations.

Keywords: Interprofessional relations. University hospitals. Residency programs. Interprofessional education
Introduction

Health care should be viewed as a collective process in which health workers adopt a coordinated and collaborative approach, applying knowledge and practices from different areas of competence to meet health needs and deliver comprehensive care to patients, their families, social groups and communities.

Interprofessional collaborative practice (ICP) occurs when health workers from different professional backgrounds adopt a collaborative approach to care, working together with a focus on the needs of patients, their families and the community to improve the quality of health care.

As a collaborative approach, ICP requires shared responsibility, some level of interdependence between individuals and role and goal clarity. However, this should take place with a certain degree of professional autonomy, entailing constant negotiation and interaction between professionals, patients, their families and the community.

The World Health Organization recommends ICP as an approach that replaces power imbalances in relationships in health care settings with relations of interprofessional partnership and joint responsibility.

Ever since the creation of Brazilian National Health System (SUS), ICP has been associated with comprehensiveness, contributing to responsive, effective actions and increased patient and team member satisfaction. However, there is still much progress to be made on ICP in health care nationally and globally.

Reeves et al. point to the need to generate more evidence on the interprofessional work-related effects of IPC interventions. A study of hospital care revealed the existence of historically ingrained elements in institutions, such as authoritarianism, power centralization, worker competition, shackled management that is out of tune with local needs, undervaluing or workers, and resistance to innovation. These features of the organization of hospital care contribute to the fragmentation of care and inefficiencies in health systems.

As a way of addressing fragmentation in health systems and advancing ICP, interprofessional education (IPE) is presented as a key mechanism for equipping professionals with the skills necessary for collaborative working. In IPE, professionals learn together about collaborative work and the specificities of each profession in order to develop the competencies necessary to enhance collaboration and care quality. IPE and ICP should therefore be regarded as interdependent, with the former equipping professionals with the skills they need to meet the challenges of latter so that it can meet the health needs of patients, their families and communities and address gaps in knowledge and understanding of interprofessional teamwork.

IPE has been discussed globally, notably in countries such as the United States, Canada, the United Kingdom and Australia, as a training approach that is able to enhance the delivery of health care. In Brazil, especially from the beginning of the 2000s, policies designed to drive changes in health training helped to strengthen training that is committed to the SUS and more specific to patient’s needs, placing an emphasis on interprofessional work. Within this context, health residency programs...
constitute a training model that can promote interprofessional working. Underpinned by the principle of comprehensiveness, these programs associate learning with practice in order to problematize the technical health care model. Uniprofessional and multiprofessional residency in professional area (RAP) programs are specialty training courses oriented towards the principles underpinning the SUS. Through in-service training, these programs seek to equip health professionals with the skills and knowledge needed to deliver care centered on the health needs of patients, their families and the community and tailored to the local context. However, professional practice remains far from the ideal of comprehensive health care.

There are RAPs for the following disciplines: biomedicine, biological sciences, physical education, nursing, pharmacy, physiotherapy, speech therapy, veterinary medicine, nutrition, dentistry, psychology, social services, occupational therapy, public health and medical physics. Aimed at promoting integration between different health professions, multiprofessional programs should include at least three different disciplines.

Residency settings include university hospitals (UHs), which are centers of human resources training and technological development. UHs are attached to universities and, in addition to the provision of health care, their mission is to promote health training. Despite the important role they play in health training, practice and research, there is limited empirical research on UHs in Brazil.

Considering the important role ICP plays in meeting patients’ needs and improving health care, the interdependence between training and professional practice, that residency training is a formative process that takes place in health services and that UHs are both health care and professional training institutions, the aim of this study was to understand residents’ experiences of ICP in a UH.

Methodology

We conducted an exploratory descriptive study using qualitative methods. The theoretical basis for this study and data analysis is rooted in national and international studies on ICP and interprofessional work.

We conducted semi-structured interviews with residents from the six unprofessional and multiprofessional RAP programs offered by a UH attached to a state university in São Paulo. Besides its importance from a care point of view, the hospital’s primary function is the provision of training to undergraduate and postgraduate students, being the priority site for six RAP programs offering a total of 45 places a year.

The study population consisted of 47 students in the second and third years of the residency program. Here it is worth highlighting that only one of the programs had a duration of three years.

The study participants were selected using purposive sampling. First, the research project was presented to the coordinators and/or representatives of the residency programs and the hospital’s education and quality sector. The invitation to
participate in the study was sent to students recommended by the coordinators and/or representatives or randomly selected from a student contact list.

The sample consisted of two residents from each of the five uniprofessional residency programs (clinical pharmacy and pharmaceutical services, oral and maxillofacial surgery and traumatology, child and adolescent health nursing, adult and elderly health nursing, and obstetrical nursing) and four residents from the multiprofessional program (speech therapy, physiotherapy and occupational therapy), encompassing all of the professional categories of UH. The inclusion criterion was residents who had been undertaking a residency program for at least six months.

Due to the restrictions introduced during the Covid-19 pandemic, the interviews were conducted using Google Meet and scheduled according to the availability of the resident and researcher. The interviews were recorded and lasted between 45 minutes and one hour and 21 minutes (average of 1 hour and 4 minutes).

We used critical incident technique-based semi-structured interviews. In the critical incident technique (CIT), evidence is collected from the respondent’s perspective and in their own words, allowing respondents to determine which situations are most relevant to them in relation to the topic of study17,18. The following elements were considered during the interviews: contextualization of the situation, the respondent’s behavior, consequences and the interviewee’s emotional experience.

The interviews were transcribed and organized using ATLAS.ti. We then performed a thematic content analysis following the stages proposed by Bardin: pre-analysis, exploration of the material and treatment of the results, inference and interpretation19. In the first stage, we undertook detailed reading of the interviews, followed by repeated re-reading of the material to define themes based on the research question, study objectives and ICP framework adopted for the purposes of the study. In the second stage, the data were coded and categorized. In the third stage, the data were organized into final categories and inferential interpretations were drawn.

The study was undertaken following the Portuguese version of the Consolidated criteria for reporting qualitative research (COREQ)20 checklist21.

The study was conducted in accordance with the ethical norms and standards for research involving human subjects set out in national health council Resolution 466/12. The study protocol was approved by the research ethics committee (reference numbers 4.469.397, 4.561.488, 4.655.623 and 4.729.053) and is registered on the national database for research involving human beings, Plataforma Brasil (code CAAE: 39512320.9.000.5392).

**Results**

Of the 14 residents who participated in the study, 11 were female and three were male. The age of the residents varied between 23 and 29 years (average age 24.86). Most of the respondents were in the second year of the residency program, with only one student in the third year. Length of time in residency training varied between 15 and 26 months.
Residents’ experiences with ICP in the hospital setting through their engagement in collaborative work involve other residents, staff, patients and their families and are mediated by facilitators of and barriers to interprofessional interactions. Three categories and six interdependent subcategories of analysis were identified (Figure 1).

Figure 1. Categories and subcategories of analysis.
Source: Author's own figure, 2022.

The UH setting and ICP

The hospital setting was described as both a facilitator of and barrier to implementation of ICP.

One of the facilitators of ICP highlighted by the residents was that the UH provided frequent opportunities for interaction between professionals from different disciplinary backgrounds and with varying levels of qualification. The recognition of the hospital as an educational space was highlighted as being a facilitator of ICP, as workers welcomed the residents and patients were open to being treated by trainees.

[...] I think that the UH offers a wealth of possibilities for working with staff from different professions. The professionals are normally geared towards education, so there is this concern about making [it] happen, about looking at these criteria to see whether the students are really considering the individual, the comprehensive approach. The environment is ideal, so to speak; not that all things happen, but it is [a place] where we seek to implement collaborative interventions in practice, collaborative practices among professionals. I think the environment is conducive to collaborative practice, really. (R5)

[...] I think team formation, qualified professionals, professionals who are willing to receive students, to receive residents, understanding the objectives of a UH, the [fact that the] patient also understands that this is a UH [...] I think all this structure that the hospital provides facilitates and enhances. (R13)

[...] I think that having both uniprofessional and multiprofessional residency programs is also a facilitating element, because from this you permit sharing between professionals because you follow the overriding residency requirements that are predetermined, so you permit sharing to take place [...] (R3)
Barriers to ICP highlighted by the residents included factors related to the hospital setting that hamper collaboration, such as the predominance of the biomedical care model, illustrated by centralized decision making in favor of doctors to the detriment of patient-centeredness.

[...] I think that it’s the hospital’s [organizational] structure, the functioning that hampers the collaborative process [...] in the sense that I have to run after the doctor because I don’t have the autonomy to solve something myself [...], and I need him for everything, so there ends up being no sharing [...] (R13)

The doctor-centered structure hampers the participation of other types of professionals, so I don’t think [...] that the structure has to be a pyramid [...] the patient always in the center and around him all the professionals, each working with their own objectives. I think that when we have this doctor-first hierarchy, then the nurse, then professional so-and-so, I think not... I thinks it’s linear and each professional has their own objectives, so I reckon that hierarchy and this doctor-centered cultures is one of the main barriers as well [...] (R3)

Excessive workload, lack of continuing training opportunities and an organizational structure that fails to promote case discussions and collaborative working were also highlighted as barriers to the development of ICP.

[...] so, depending on demand, if there was a lot [...] of patients to see on the day, during the shift, sometimes I couldn’t, for example, wait for the occupational therapist to have a time slot that matched my availability to go and see the patient with her [...] (R4).

One of the things we observe [...] continuing training within the professions is a little lacking [...] (R4)

[...] I thinks this practice of seeing patients together, discussing cases more often, could be more structured [...] I reckon it depends a lot on the person who’s providing the care, so perhaps if it was more established that certain cases need care that is provided jointly, I think it would happen more often. (R6)

The subjects involved in ICP in the UH

Workers, residents, patients and their families are the subjects involved in ICP in the UH. The quality of the interactions between these subjects was a determining factor for the development of ICP. While collaborative working was limited by professional hierarchy, horizontal relationships between the residents involving high quality interactions and communication appeared to have a positive influence on ICP, making residents facilitators of collaboration.

The interviewees mentioned that the relationship between the residents and hospital staff was hierarchical, with residents being at the bottom of the ladder. The
lack of continuing professional development to update skills and knowledge, time, patience and interest in instructing residents are factors that can have a negative influence on the quality of interactions.

[...] so I reckon that the failure to update skills and knowledge is also a constraining factor, both in terms of the way of working and way of relating, and sometimes leads to a bit of a clash of mindsets. So I think that sometimes residents are a little more open than other professionals when it comes to sharing. (R14)

[...] but often you, as a resident, call a nurse in the surgical center and he doesn’t have time and doesn’t want to speak to a resident [...] you face these barriers whereby the professional doesn’t want to give attention to the resident. Residents are residents [...] and the professional doesn’t have the patience to explain. So they end up treating you as they want, having a dig at you, that’s how things happen. (R8)

The interviewees reported that ICP between residents and other health workers is not common. The residents prefer and feel more comfortable interacting between themselves, seeking out other health workers when they judge necessary.

[...] we rarely speak to assistants, someone who is above you, straight off; only if the residents from that specialty think it’s necessary [...] (R8)

[...] sometimes you feel more comfortable speaking to another resident [...] (R14)

The respondents suggested that ICP between residents takes place regularly because they feel that interaction occurs between “equals”. They see themselves as belonging to the same category and united, which makes them feel more comfortable collaborating and asking for help. Their background training, with an emphasis on teamwork, is also associated with greater readiness to engage in collaborative work.

[...] between us residents it’s super positive [...] sometimes they accept your idea and we do it together, we get to work, they help a lot with day-to-day things, with practices [...] I think they have a more equal relationship [...] between different professions. (R9)

[...] maybe it takes place more frequently between professionals and residents than between professionals and professionals [...], I don’t know whether it’s because the professionals were already working [here], know each other, already know kind of which measures their colleague is likely to take and don’t communicate with one another, or if it’s because residents are actually curious and feel the need because we learnt a lot about [collaborative] practice in theory, working together, working in a team [...] and we always try to take that with us and live it. (R10)
The residents saw themselves as facilitators of patient and family participation and ICP, although they recognized that the former was limited. Low patient socioeconomic status and education levels were highlighted as barriers to patient engagement in care.

Depending on the professional who is in contact with the family, we get information that nobody had [...] normally it’s undergraduate students or residents who have this attitude. (R10)

I think that patient and family participation is very limited. I feel that’s the case in the care provided by the UH as a whole [...] (R14)

[...] in the UH we have a population with a critically low level of income, education and social status [...] so don’t always have a [good] understanding ... We have received various patients who don’t know how to read, that don’t know how to write, and that’s a major challenge [...] we come up against various social factors that sometimes make it difficult to receive the patient, understand their history and try to give them discharge instructions and advice on the habits and behaviors they need to change. (R1)

ICP actions in the UH

ICP actions consisted mainly of shared consultations, meetings and, occasionally, actions mediated by informal communication.

Shared consultations were previously agreed between the residents, defining common objectives for each case. During meetings, various types of professionals were given the opportunity to comment on the care process, provide information on patients, raise questions, discuss the case and give their opinions on treatment strategies, always focusing on the patient.

[...] with internal medicine [...] we saw some of the patients together; occupational therapy and physiotherapy, occupational therapy and speech therapy. But this was agreed among the residents, when there was a case that we were treating together with a common objective ... (R6)

[...] we manage to adapt and discuss things and have to focus on the patient, on making the patient better. It is really rich, because sometimes there are things that we say to the other teams, things they don’t know, and these teams also pass on things that we don’t know [...] (R2)

Informal communication was the preferred way of sharing information and promoting shared decision-making. The residents commented that informal conversations were held without prior scheduling to define treatment strategies, discuss informal referrals, invite colleagues to take part in shared consultations, ask for assistance, clear up doubts or even share patient notes and treatment strategies. Most shared consultations were also arranged informally.
[...] it’s all “word of mouth” in the UH; we would always go there in person, talk about the [patient’s] diet. If there wasn’t any body there, we’d leave a message [...] (R4)

[...] we discuss a lot of cases with the nutrition team because occasionally our patients aren’t able to chew, so we always discuss cases. But it’s all very simple, a chat in the corridor [...] with the nursing team as well, some of our patients need special attention, like a face ice pack, keeping the patient in the supine position, which is really important. So we always talk to the nursing residents, for certain specific care needs; but it’s always a chat in the corridor. (R8)

Discussion

Collaborative interprofessional teamwork has a positive impact on the quality of hospital care22. Collaborative actions enhance health care both in terms of efficiency and quality, gaining increasing prominence in hospital settings. Veloso23 suggests that UH settings are conducive to ICP due to their links with universities, making them “campuses” of teaching and research in this area, and due to the constant presence of undergraduate and postgraduate students and researchers.

The hospital analyzed by this study was described as a setting that presents both facilitators of and barriers to the implementation of ICP. According to the residents, the fact that its mission is geared towards care, teaching and research makes the hospital a rich and potent space for interaction with other professionals. In this sense, the presence of residents from different uniprofessional and multiprofessional programs is also seen as a facilitator of ICP. In the same vein, Rebouças, Goldin and Pinheiro24 observed that the presence of residents in the hospital setting, especially those from multiprofessional programs, promoted greater interprofessional contact and recognition of the roles of each professional by hospital workers. The authors also highlight that the residents valued ICP and patient-centered comprehensive care.

One of the barriers highlighted by the interviewees was the predominance of the biomedical care model, characterized by centralized decision making in favor of doctors and cure-oriented and disease-centered care25. An organizational structure that favors medical dominance hampers the establishment of horizontal relationships between health professionals26 and adversely affects the participation of other types of professionals who are equally necessary to respond to the needs of patients, their families and the community. Considering that relationships between health professionals are a reflection of organizational structure26, the characteristics of the study setting had an impact on the relationships between the subjects involved in ICP.

Interactions between professionals and residents were influenced by professional hierarchy, which limited collaborative actions. Power imbalances in relationships between health professionals undermine the underlying goals of interprofessional work and contribute to friction and conflict, weakening collaboration27. According to
the findings of a literature review on this topic, studies on interprofessional education and practice have paid little attention to the influence of power, and knowledge of the impact of power relations on health care is limited. However, it can be said that interprofessional work tends to be undermined by unexplicit power structures where professionals occupy defined positions within a hierarchy without any space for shared decision-making.

Nonetheless, horizontal interactions between the residents were a facilitator of the implementation of ICP and construction of symmetrical care relationships. With regard to professional relations, the literature suggests that power asymmetries can result in undervalued staff and discrimination between workers, leading to individual and fragmented actions and thus acting as a barrier to interprofessional work. To encourage horizontal relations between subjects involved in care and ICP, it is essential that opportunities for shared decision-making, cross-professional communication and conflict resolution are institutionally supported.

Power imbalances between subjects weaken ICP and, above all, the participation of patients and their families. Despite the use of the term “interprofessional”, this type of practice is not restricted to professionals. The participation of patients and their families is key to ensuring that their needs are met. The findings show that, despite being valued by the residents, patient participation is still limited, being associated with patient socioeconomic status and education level, illustrating a weak understanding of the patient’s role in care. Martin and Finn observed four key factors related to the representation of patients in health teams: clarity of the patient’s role, an understanding of patient identity and the set of skills they bring to the team, feeling of being integrated into the context of the team and institutional context, and a sense of trust between the patient and team members. Although working with these elements in an institutional context is a major challenge, it can help address power imbalances in the relationships between professional team members and patients.

Despite barriers, the residents described ICP in the form of informal communication, shared consultations and meetings. According to Peduzzi et al., informal exchanges aim to develop interprofessional agreements within health service work processes. Arruda and Moreira also suggest that informal communication is conducive to collaborative work, insofar as it bolsters interpersonal relations, respect, trust and attention to requests.

Interprofessional consultations and meetings are other key ICP actions, as they promote case discussions and cooperation.

ICP is expected to reduce power imbalances through interactive and communicative learning, provide the opportunity to clarify roles and recognize the contribution of different types of health workers to health care delivery. Traditional uniprofessional training and the consequential lack of knowledge about the theme contribute to resistance to collaboration. Resistance may also be associated with the protection of the gains obtained from performing specific professional tasks and duties.

It is recommended that IPE should be cross-cutting and continuous, beginning at undergraduate degree level and continuing through postgraduation and in-
service training, in the form of permanent education for health (PEH)\textsuperscript{35,36}, ensuring its presence across all stages of the training and professional development process\textsuperscript{35}. Despite widespread recognition of the importance of IPE, the effective implementation of interventions in health services remains a challenge\textsuperscript{37}, corroborated by the findings of this study, when the residents highlighted the lack of opportunities for PEH oriented towards IPE. In a context of limited training for interprofessional work\textsuperscript{1,7,11,33}, PEH can provide professionals with the opportunity of their first contact with IPE, continuous learning and, consequently, engagement in ICP. PEH should include the development of the skills and abilities needed to share knowledge and experiences of developing professional competencies\textsuperscript{36}.

The content of health residency programs and their objectives and purpose should be guided by education plans (EPs). A study analyzing six EPs for multiprofessional residency programs in the state of São Paulo found that, while programs are spaces that are highly conducive to the development of IPE, none of the programs explicitly emphasized this approach\textsuperscript{38}. The study also showed that, while IPE was not explicitly emphasized in the EPs, it can be associated with other related concepts, such as patient-centered practice and collaboration between professionals\textsuperscript{39}.

The present study identified the need for changes to training and the practice of residents, professionals and hospital managers, focusing on interprofessional working and the transformation of practices through PEH. One of the limitations of this study was the non-inclusion of medical residents. It is also important to highlight that the analysis of program EPs was beyond the scope of this study and that future research exploring the perspective of tutors and preceptors could provide a more in-depth analysis. These professionals are key agents in promoting the integration of teaching, service and the community, which is necessary to foster an interprofessional approach to the delivery of care. It is also suggested that future studies should explore the perspective of patients and families in order to broaden the analysis of ICP.

Final considerations

The hospital setting was described as both a facilitator of and barrier to the implementation of ICP. It is a potent training setting for interprofessional collaborative practice because it provides frequent opportunities of interaction between different types of professionals with different levels of qualification.

Barriers to ICP include the predominance of the biomedical care mode – in which decision-making is centralized in favor of doctors to the detriment of patient-centeredness – excessive workloads and weak organizational structure. The relationship between residents and health workers was described by the participants as hierarchical, with residents being at the bottom of the ladder. The quality of interactions directly influenced the effectiveness of ICP. The interviewees also commented that ICP between residents and other health workers was not common and the participation of patients and their families is limited.

Institutional support and PEH focusing on IPE are key mechanisms for advancing ICP in the hospital. PEH should be aligned with practice in order to meet current
health demands. The link between PEH and practice needs to be promoted with
greater intensity across sectors in order to equip professionals with the skills and
knowledge necessary to work collaboratively to improve the delivery of health care.

Residents defend ICP and develop actions among themselves, meaning they play
a key role in driving discussion and questioning traditional cure-oriented and disease-
centered practices. However, they need to receive greater recognition and be more
valued in this respect.

The university hospital therefore needs to be more open to ICP. Furthermore,
the improvement of resident training and residency programs in the direction of
collaborative health practices and interprofessional work can help promote ICP,
considering the potentially key role residents play in reshaping health care models in
these settings.
References


Resumo

Este estudo tem por objetivo compreender a experiência de residentes sobre a Prática Colaborativa Interprofissional (PCI) em um hospital universitário (HU) do estado de São Paulo. É uma pesquisa qualitativa realizada por meio de entrevistas semiestruturadas com base na Técnica do Incidente Crítico, com 14 residentes de programas de residência uni e multiprofissionais, analisadas pela análise temática de Bardin. O HU mostrou-se potente para efetivação da PCI por proporcionar interações entre profissionais de diferentes áreas e níveis de formação. A qualidade das interações entre trabalhadores, residentes, usuários e família foi determinante para o desenvolvimento da PCI. Foram identificadas barreiras como ausência de estruturação organizacional, sobrecarga dos profissionais, fragilidade na oferta de Educação Permanente relacionada à educação interprofissional e predomínio do modelo biomédico de Atenção à Saúde. As ações colaborativas mediadas pela comunicação informal constituem o dispositivo mais utilizado para os atendimentos compartilhados.


Resumen

Este estudio reta comprender la experiencia de los residentes sobre la Práctica Colaborativa Interprofesional (PCI) en un hospital universitario (HU) en el estado de São Paulo. Investigación cualitativa a través de entrevistas semiestructuradas basadas en la Técnica del Incidente Crítico con 14 residentes de programas de residencia uni y multiprofesionales, analizadas por análisis temático de Bardin. El HU demostró ser potente para la implementación de la PCI al propiciar interacciones entre profesionales de diferentes áreas y niveles de formación. La calidad de las interacciones entre trabajadores, residentes, usuarios y familiares fue crucial para el desarrollo de la PCI. Se identificaron barreras como falta de estructura organizacional, sobrecarga de profesionales, debilidad en la provisión de educación permanente interprofesional y predomínio del modelo biomédico de atención. Las acciones colaborativas mediadas por comunicación informal son el dispositivo más utilizado para el cuidado compartido.