

Enhancing Primary Health Care through Interprofessional education: Insights from a Training Workshop

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Abstract

Introduction. Strengthening primary care services with a focus on comprehensive Primary Health Care principles necessitates collaborative work practices within interprofessional teams. In Italy, the Local Health District of Florence embodies a comprehensive Primary Health Care -inspired model of primary care, prominently featuring the House of Community concept. This work presents findings and insights from a multidisciplinary, interprofessional education activity tailored for healthcare professionals, researchers, and students actively participating in the primary care reorganization.

Methods. The activity was structured using a four-phase learning model (imaginative, analytical, common sense, and dynamic), aligning with four distinct activities (brainstorming, lecture, case study, and group project).

Results. Key themes that emerged encompassed the significance of nurturing relationships among team members, the aspiration for an inclusive work environment, the vital role of community engagement and collaboration across various services, disciplines, and sectors beyond healthcare.

Discussion. These themes highlight the essential attributes of successful primary care practices built on the principles of comprehensive comprehensive Primary Health Care. Throughout the innovation process of primary care services, interprofessional

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education training events emerged as indispensable components for bolstering implementation and ensuring sustainability. This study underscores the crucial role of interprofessional education in bridging the gap between theoretical constructs and practical application, emphasizing that comprehensive Primary Healthcare principles find tangible manifestation in real-world scenarios.

Introduction

Primary Health Care (PHC) represents a holistic approach to health that aspires to maximize the overall well-being and health of individuals by prioritizing their health needs to reduce health inequalities towards equity in health, even during the COVID pandemic (1-3). This approach spans the entire spectrum of health-related activities, encompassing health promotion, disease prevention, treatment, rehabilitation, and palliative care. Its comprehensive meaning (comprehensive-PHC = c-PHC) integrates health services, professionals, and disciplines, combining primary care (PC) with public health functions and other sectors than health. In fact, it involves the implementation of cross-sectoral policies and initiatives aimed to address the broader determinants of health. Furthermore, it seeks to empower individuals, families, and communities, promoting social engagement, self-care, and self-reliance in health (4, 5). An essential aspect of fortifying PC systems, based on c-PHC principles, revolves around the constitution of multidisciplinary (MD) and interprofessional (IP) teams, which implies the sharing of values and actions (6). This is recognized as a pivotal strategy for enhancing the effectiveness and the quality of healthcare services, given the limitations faced by individual PC physicians because of time constraints, competencies, and, mostly, the increasingly diverse and complex health needs encountered in PC settings. Organized IP teams have demonstrated their positive impact on care quality, access, cost, perceived health status and satisfaction among healthcare professionals (HPs) (7-11). It is widely acknowledged that the inclusion of HPs from various disciplines in PC teams, such as medicine, nursing, pharmacy, social work, and psychology, can contribute to improved healthcare quality. Each profession brings unique skills, knowledge, and perspectives to the table, complementing the work of their colleagues within the team. This collaborative

approach to care aims at ensuring that patients receive comprehensive and coordinated healthcare that addresses their physical, psychological, and social needs (12, 13). Interprofessional education (IPE) and interprofessional collaborative practice (IPCP) hold the potential to make a substantial impact on the challenges confronting healthcare systems worldwide (14, 15). The World Health Organization (WHO) defines IPE as the process through which HPs learn from each other to improve health outcomes. In contrast, IPCP involves HPs from diverse backgrounds collaborating with patients, families, caregivers, and communities to deliver comprehensive care and achieve the highest possible service quality (16), even in the post-COVID-19 pandemic era (17). Previous studies reported the positive impacts of IPE on HPs, students, and future HPs. Specifically, IPE enhances the ability of HPs to manage chronic and complex health conditions, improve team functionality and climate (18-20). For students and future HPs, IPE fosters collaborative learning practices by developing skills such as IP communication and role comprehension (16, 21). It also contributes to reducing stereotypes, enhancing mutual attitudes toward medical and nursing professions, and fostering mutual appreciation by promoting role understanding and patient safety (22). IPE serves as a valuable tool for enhancing and reinforcing collaborative work practices when three essential elements coexist: the pedagogical approach, the theoretical framework, and practical scenarios with an impact on population health needs (23). This framework revolves around the central concept of ongoing healthcare education, bridging the gap between healthcare services and academic institutions, with a focus on addressing specific population needs (23).

In the context of the present day, marked by ever-evolving healthcare challenges and the aftermath of the COVID-19 pandemic, there exists a pressing imperative to fortify PC services, guided by the principles of c-PHC (4, 5). These principles, while

universal in their aspiration, must be applied contextually, recognizing that different situation — shaped by policies, history, society, culture, and local health needs — call for tailored approaches.

In response to the current healthcare needs, the Italian government has introduced a novel approach to PC organization, establishing what is referred to as the House of Community (HoC — ‘Casa della Comunità’) within a public Local Health District (LHD). The primary goal of the HoC is to serve as accessible hubs for the community, facilitating health promotion, preventive measures, assistance, and the seamless provision of continuous care (24). Within the LHD of Florence we find a pioneering example of a c-PHC model that places the HoC concept at its core. Moreover, to our knowledge, no prior studies have been conducted in Italy that explore the implementation and impact of c-PHC principles within the House of Community (HoC) model, particularly within a public LHD.

Thus, the aim of this study is to share the findings and insights garnered from an exploration within the context of the implementation of this comprehensive PC model within the LHD of Florence. In particular, this study has a dual focus:

- to comprehensively describe the organization, design, and implementation of a training event aimed at fostering innovative models in primary care services.

- to identify and emphasize key themes and factors contributing to innovation within primary care services.

Methods

Workshop Development

This IPE activity for HPs was created by a team (from now on “research team”) of 5 young general practitioners and public health physicians (M.DR., C.M., G.N., G.O., I.P.) with previous experiences in medical education with the International Federation of Medical Students’ Associations (IFMSA), the Italian Secretariat of Medical Students (SISM), and the Italian Society of Medical Pedagogy (SIPeM). The trainers also lead the IPE activity. All materials and written documents, presentations, and activities were created by the authors during the year before the realization of the workshop (March 2022 – March 2023). The workshop was endorsed by different institutions, involved in the reorganization analysis of PC service in the LHD of Florence: the Department

of Health Sciences of the University of Florence, the LHD of Florence, the Florence Municipality, the Health Society of Florence (a consortium between the LHD of Florence and the Florence Municipality) and the Regional Health Agency of Tuscany.

The participants

The decision was made to require a minimum of 15 participants for the IPE activation. Additionally, a maximum of 36 participants was set as an a priori target to ensure manageable group sizes during activities, such as creating six groups of six people, and to facilitate interactions among participants. To promote diverse perspectives and facilitate rich interactions among participants, the LHD identified potential participants from various backgrounds, specifically those actively engaged in PC services or pursuing educational and research experiences within the same context. The organizing group and the LHD mutually agreed that representing a wide range of disciplines and services in the workshop was essential. Consequently, the ideal pool of professionals was identified, with requested ideal participant numbers specified in parentheses based on their availability within the PC services: 10 General Practitioners, 5 Public Health Physicians, 5 Nurses, Physiotherapists, Healthcare Assistants, Obstetricians, and students in healthcare fields. Participation was extended to University Departments collaborating with the LHD. Prior to the workshop, the identified participants were emailed a preworkshop reading packet with instructions on location, tools to be known and used during the workshop, educational documents on c-PHC.

The agenda and the activities

The methodology used to design the training workshop and its activities was adapted from McCarthy’s 4MAT model (25-27), a learning cycle that is designed to address the different learning styles and preferences of learners. It consists of four distinct phases, each corresponding to a different type of learner:

- the “imaginative phase” focuses on creativity and imagination. Learners engage in brainstorming, mind mapping, visual aids, and group discussion;

- the “analytical phase” focuses on logic and analysis. Learners focus on understanding and organizing information through activities such as lectures, readings, note-taking, and analysis of data;

- the “common-sense phase” focuses on practical application and real-world examples. Learners apply

what they have learned to real-world situations through activities such as case studies, simulations, role-playing, and problem-solving;

- the “dynamic phase” focuses on exploration and experimentation. Learners apply what they have learned to new situations and contexts through activities such as hands-on experiments, field trips, and group projects.

Interprofessional Education

The agenda was built over two days and included all the four phases, represented by four activities (Figure 1). In particular, after deciding and sharing the ground rules of the workshop (e.g. respect others’ interventions, no interruptions during others’ intervention, etc.) and collecting the participants’ expectations on the event, the first activity consisted in a brainstorming and discussion on the participants’ understanding of PHC meaning, and the aspects of their routine activities they deem the most relevant.

Afterwards, the second activity consisted in a lecture focused on PC services, the concept of c-PHC and its principles, and its applications in the local context. In the third activity, conducted as a group exercise, participants were tasked with addressing a real-world case scenario. They initially identified and discussed the primary health determinants that significantly influenced the circumstances presented in the case. Subsequently, they engaged in a discussion regarding the available resources that could be effectively activated to address the situation. Lastly, in the fourth activity, the participants were asked to

reflect on factors contributing to positive working environment, and, in groups, to sketch or draw the best PC environment to work in and address population needs (Table 1).

The text of the case-study, as given to the participants, is reported in Supplementary file S1. The workshop ended with a brief evaluation where participants were asked to respond to two questions: 1) ‘What did you like the most about this workshop?’ and 2) ‘What would you like to see changed if you were to participate in a future edition of the same workshop?’.

Data collection and analysis

For each activity, participants’ responses were collected either individually or in groups using Mentimeter, a web-based Audience Response System commonly employed to enhance active learning in large classrooms (28). Additionally, notes were taken on a shared document by one of the trainers. In particular, Mentimeter was used to collect and summarize ideas during the first activity (e.g. brainstorming on the meaning of c-PHC), and for the final group discussion and evaluation.

The analysis was then conducted in two phases: the first phase involved a descriptive analysis, aimed at detailing the workshop activities and summarizing the outcomes based on materials produced by the participants. In the second phase, a qualitative analysis was carried out. This involved a thorough examination of the workshop-generated materials to identify pertinent themes emerging from participant

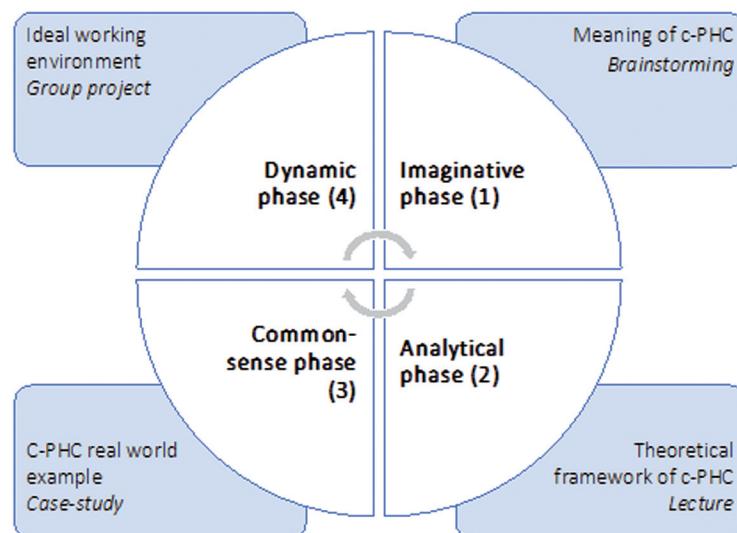


Figure 1 - Graphical representation of the four activities. Adapted from McCarthy’s 4MAT model.

Table 1 - Description of the activities of the Workshop.

4MAT phase	Activity	Type of activity	Effective duration
1 – Imaginative	Brainstorming on PC meanings	Individual activity	45 min (of which 30 mins for review and discussion)
2 – Analytical	Lecture on c-PHC (topics: principles of c-PHC; health inequalities and changing health needs in COVID-19 times; strengthening c-PHC in the present context; meaning and principles of the House of Community in the Italian context)	Led activity	75 min (including question time)
3 – Common sense	Case-study	Group activity	180 min (of which 50 % review and discussion)
4 – Dynamic	Design of ideal workspace	Group activity	180 min (of which 50 % review and discussion)

perspectives; these themes were considered essential for informing the planning and enhancement of primary care services.

Specifically, responses were initially transcribed and subsequently reviewed multiple times by two researchers from the research team to ensure a thorough comprehension of the content. These two researchers also developed initial codes, which were used to categorize similar responses based on their shared meaning. This process of coding and categorization was conducted iteratively, with categories refined and revised as necessary until a clear and comprehensive set of categories emerged (29). The initial analysis was then shared with the research team for validation, facilitating a comprehensive understanding of the participants' perspectives on the investigated topic.

Results

The workshop took place in Florence on 14th (afternoon from 15:00 to 18:00 including a short break) and 15th (all day, including two breaks and one lunch break) April 2023. Twenty-two individuals participated in the workshop, and specifically 5 between GPs and trainees in family medicine, 6 public health physicians and public health residents, 5 nurses, 1 physiotherapist, 1 healthcare assistant, 2 architects, 2 medical students. The results of each activity are summarized in the following paragraphs.

Ground rules and expectations

During the ground rules discussion, a consensus emerged among the participants regarding the paramount importance of open and respectful

communication. They emphasized the need for a collaborative and inclusive environment, fostering active engagement and knowledge sharing.

While discussing their expectations, most participants expressed a keen interest in developing IPCP. Additionally, the participants expressed a strong desire to establish connections with professionals working in the same field, who are dedicated to enhancing PC strategies for tangible, actionable outcomes.

First activity – group brainstorming on what c-PHC means

In the brainstorming session, participants shared insights and perspectives, forming a mosaic of words and phrases that collectively embodied their understanding of PHC. Among the diverse range of words and concepts, this collaborative exercise unveiled four predominant themes that encapsulated the essence of PHC for the participants, each chosen for its significance:

Comprehensiveness: participants emphasized the holistic nature of PHC, highlighting its role in addressing complex health needs that extend beyond the purview of single professions. Teamwork strongly emerged as a leading factor in innovating strategies for comprehensive care;

Care coordination, IPCP and Intersectoral Collaboration: beyond the mere act of working together, participants stressed the importance of coordination and the need for specific coordination roles. The concept of building a collective identity within the group ("learn how to build a 'we', instead of an 'I'") was prominent. The IP and MD group was seen as a fertile ground for the development and

improvement of practices, particularly in the context of complex problem-solving.

Equitable Resource, Allocation, and Responsibility Management: participants recognized that achieving health equity through PHC necessitates a profound understanding of a community's needs and the allocation of resources accordingly. The concept of fair resource distribution and management was underlined as integral to PHC's mission.

Accessibility to the Healthcare System: accessibility to healthcare services was identified as a multifaceted challenge influenced by a multiplicity of factors. Participants emphasized the futility of improving services or clinical pathways if they remained unknown or inaccessible to the intended beneficiaries. Furthermore, tailored services to address specific needs, such as mediation services, were highlighted as essential to reducing access barriers.

Second activity – lecture on the theoretical framework of c-PHC and what primary care organization in Florence

The words shared in the brainstorming and the 4 PHC principles identified were the starting point for theoretical alignment. The second activity was indeed designed to further develop the plausible insights generated during the initial brainstorming session and the identification of some PHC principles with practical examples. Here, the themes addressed in the lecture are listed: theoretical principles of c-PHC and its historical evolution; health inequalities and the changing health needs emerged during the COVID-

19 pandemic; the need of strengthening c-PHC in the present historical and political context; the mission of the HoC - a newly proposed organizational model of local health and community center - which in Italian context can embrace c-PHC principles within a publicly funded LHD.

Third Activity – Case Study Analysis

The analysis of the case study by the four groups aimed to practically apply the theoretical content conveyed during the plenary session and resulted in the completion of a grid that delved into the health determinants and processes influencing the management of these needs. Moreover, it highlighted the activatable resources within the individual and the community levels (Table 2).

Fourth Activity – Ideation and design of an ideal workspace

The analysis of the drawings created and displayed by the groups yielded the identification of c-PHC related principles. These principles encompassed PHC-related challenges, the presence of a public healthcare service as a reference point, the importance of competencies, the significance of welcoming environments, nurturing relationships, and fostering empathy. Additionally, principles included community involvement, participatory health promotion, comprehensiveness in addressing individuals' health needs, as well as attention to the well-being of HPs. Furthermore, the integration of services and collaboration among various HPs and disciplines were

Table 2 - Health Determinants and Activatable resources and actions emerged from the Case study analysis (third activity).

Health determinants	Activatable resources and actions to be taken
Individual determinants: level of education, personal health/ clinical conditions, vulnerability status, health literacy, etc.	(Deep understanding of the) family, social, and environmental context. Formal and informal resources within the community (volunteers, neighborhood networks, local social services).
Familial factors: family environment, number of household members, caregiver presence and level of education.	Interprofessional collaboration and integration among HPs in defining the care path.
Socio-economic and housing aspects: income, employment and housing conditions, built environment, neighborhood characteristics, presence of public transportation, local infrastructure, etc.	Psychological services.
Healthcare system organization: accessibility barriers, service reception capacity, facility visibility, integration and continuity between different levels and settings, interprofessional communication, proactive or reactive service approach.	Multidimensional assessment committees.
Level of education among PC professionals and social care providers.	Specialized services (geriatric specialists). Palliative care teams. Long-term care facilities. Involvement of the individual and caregiver in the development of the care plan to establish a foundation of trust. Continuing education and support for the family and the caregiver. Continuing education and training programs for primary care practitioners, involving students, interns/trainees, and researchers in joint initiatives.

Table 3 - Symbols and themes drawn as representative of an ideal workspace (fourth activity).

Symbols	Themes
Wind	Challenges in daily work - the variability of health, work, and social conditions (PHC-related challenges)
Boat in a stormy sea	National Health Service as the guarantor of the right to health currently facing difficulties
Rudder	Competencies that must be acquired by the professionals
Magnifying lens	
Coffee pot	
Coffee cup	Take care of relationships
Plants to care	
Notebook with blank pages	
Pencil	Participatory processes
Road	Communities
Circle	
Lamppost	Comprehensiveness (global management of the person's health aspects) Attention to the needs/well-being of the professional)
Hands holding the notebook with blank pages	
Hands with different colors/sizes	Collaboration and integration between professionals and disciplines
Table	

emphasized. Symbols and themes displayed during the activity are summarized in Table 3.

Final Evaluation

The contents of evaluation by participants and final reflections revealed enthusiastic reactions, particularly regarding the following issues:

- Teaching Methodology: non-frontal, participatory methodology with activities in multi-professional groups allowed participants to experience collaboration and communication among participants and easier discussion among different professionals;

- Classroom atmosphere: positive energy, enthusiasm, creating environment favorable to exchange ideas;

- Training content/learning outcomes: usefulness of topics-MD collaboration, PHC through participants discussion.

- Two participants offered constructive feedback, suggesting that more time should have been allocated for the activities and discussions.

Primary Themes from the Analysis

Considering the themes described and emerged by the different activities, 3 main groups can be identified as the main relevant. The first refers to the importance of positive work relationships and welcoming environments. Another group is the community involvement and health promotion activities through community participation and comprehensiveness

in addressing health needs. Lastly, the reinforcing of integration and collaboration between HPs and services is a common element to both the previous themes.

Discussion

The present study describes our initial endeavor to design, implement, and report on a specialized IP training event that aligns with, and supports the ongoing reorganization of PC services in the LHD of Florence. This reorganization centers on the implementation of the HoC model, emphasizing the integration between different professionals and services and IPCP. The workshop took place in Florence and saw the presence of 22 participants among HPs, researchers, and students of different health-related fields. The first activity consisted in a group brainstorming where 4 principles were identified as main, necessary components of well-working PC services: comprehensiveness, IP collaboration, reflective learning spaces, and equitable resource distribution. The second activity, which consisted in a lecture on c-PHC, provided the group theoretical frame on this topic, and highlighted the presence of the four mentioned principles in the c-PHC framework (4, 5). The third activity – the analysis of a case study – was aimed at identifying all the factors that determined the health condition of hypothetical

subject depicted in the case study, and the resources that should be available and activated within the PC assistance. In their analysis, the groups included individual factors, family dynamics, socio-economic conditions, healthcare system organization, and the education level of PC professionals. Activatable resources, on the other hand, encompassed adapting responses to the family and social context, promoting IPCP, involving individuals and caregivers in care planning, and fostering HPs' well-being through education and training programs. As a secondary output of this activity, it should be highlighted that these themes mirror the topics emerged in the first activity: comprehensiveness (holistic management of health aspects); IPCP and intersectoral collaboration, which also necessitates dedicated educational and self-reflective spaces; equitable distribution of resources. Lastly, the fourth activity allowed the participants to draw their ideal working space within the PC services. Subsequent discussions highlighted a strong alignment between the symbolism in their drawings and the principles that had emerged in previous activities. Notably, welcoming environments and positive work relationships were cited as crucial for both HPs' well-being and the positive outcomes of their work. Additionally, community involvement, participatory health promotion, and comprehensiveness in addressing individuals' health needs, which had been previously discussed, resurfaced as key considerations in designing the ideal workspace.

The alignment between the themes emerging from practical activities and those deemed significant during the brainstorming phase carries significant implications. Specifically, the resonance between theoretical discussions and practical case analysis underscores the consistency and practical applicability of c-PHC concepts across various stages of the learning process. This observation highlights that these concepts extend beyond theoretical constructs and manifest tangibly in real-world scenarios. A pivotal theme revolves around the significance of nurturing supportive relationships among team members when implementing IPCP. This is closely linked to a shared desire for a welcoming work environment and the cultivation of positive working relationships. These aspects benefit from dedicated time frames for discussion and co-design, as well as team meetings for reflection and learning from daily practice (16, 21). IPE, in conjunction with an action-research process, facilitates the sustainability, observation, and monitoring of working practices. In this context,

the inclusion of a training program designed to support reflection on practices and team dynamics becomes necessary (30-32). Moreover, the idea of creating an environment based on mutual respect and shared values, which include trust, honesty, and integrity, is a key aspect of the Core Competencies for Interprofessional Collaborative Practice outlined by IPEC in 2016 (33). Effective IP communication is indeed another important aspect and emphasizes the relevance of active listening, encouraging team members to share their ideas, giving constructive feedback in a timely manner, and respectfully responding to feedback from others. Furthermore, it involves recognizing that individual qualities, such as experience, expertise, cultural background, and role within the healthcare team, contribute to effective communication, resolving conflicts, and building positive relationships with other professionals (33).

The second important theme emerged refers to community engagement and collaboration across sectors. PC services aim to address community health issues and equity by working closely with community members and sectors beyond healthcare to ensure fair resource distribution (6). This involves understanding community health concerns and holding regular IP meetings with HPs, researchers, students, and community members to analyze health issues, set priorities, and plan activities (34, 35). IPE helps guide this process, encouraging reflection, impact assessment, and quality improvement. Students, trainees, and researchers participate in community-based education to analyze health problems, assess socio-economic factors, and build relationships with community stakeholders (4, 36). This experience enhances their skills and understanding of IPCP.

The reorganization analysis of Primary Care (PC) services within the Local Health District (LHD) – centered on the Houses of Care (HoCs) – aims to provide Comprehensive Primary Health Care by integrating health and social services and ensuring continuous care. This necessitates the inclusion of Interprofessional (IP) training experiences and active involvement of healthcare professionals (HPs) and management at various levels (24). The emphasis is on fostering Interprofessional Collaborative Practice (IPCP) and engaging professionals from diverse services and disciplines. These IP experiences provide valuable spaces for shared learning and reflection on practices, facilitating the adoption of c-PHC principles. Furthermore, they play a vital role in acquiring the foundational elements upon which IP teams are built, including shared values, a common language, trust,

and respect for defined roles. In this process, involving HPs, future HPs, and students helps in bridging the gap between PC services and universities. Students and trainees can also engage in practical research to support innovation. In this context, HoCs and similar new models in PC provide both physical and functional spaces where IPE training experiences can thrive; simultaneously, these experiences contribute to the implementation and sustainability of these new PC models.

Limitations of this study encompass several factors. First, the sample used for data collection was a convenience sample, which may limit the generalizability of our findings to a broader population. However, it's important to note that the learning methodology employed in the workshop is easily transferable, offering potential applicability in various healthcare contexts. Second, the study's focus on qualitative data predominantly restricts quantitative assessments of the workshop's impact. While this approach allowed for an in-depth analysis of participant insights, it may have missed quantitative nuances. Moreover, the single-location focus of our study ensures specificity and potential local applicability of our results. However, it poses challenges when attempting to extrapolate our findings to other healthcare settings or regions. Lastly, the long-term effects of the workshop on participants' knowledge and practice remain unexplored in this study. Nevertheless, our research group is actively considering follow-up studies with the same cohort. These potential follow-up studies could include longitudinal assessments to track sustained impacts and investigate the possibility of participants becoming peer educators who share workshop knowledge within their healthcare communities.

Despite these limitations, the study's strengths are evident. The workshop was meticulously designed and executed by a multidisciplinary research team, providing an engaging and informative educational experience. The diverse backgrounds of participants, including healthcare professionals, students, future professionals, and researchers from non-healthcare disciplines, enriched discussions and offered a holistic perspective.

Conclusions

This study operates within the framework of IPE and c-PHC and it highlighted essential elements for designing, implementing multi(inter)professional

training events that align with and support the reorganization of PC services.

The IPE experience described suggests the importance of associating an IPE training course with the reorganization of services and allowed to identify some priority themes in implementing such reorganization. In addition, this first experience showed the satisfaction of the participants, the consistency between the themes and principles to strive for, and some organizational elements to be acted upon.

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Riassunto

La formazione interprofessionale per il miglioramento delle Cure Primarie: riflessioni a partire dall'esperienza di un workshop

Introduzione. Il rafforzamento dei servizi di cure primarie orientato ai principi della *comprehensive Primary Health Care* richiede di sviluppare pratiche collaborative in team interprofessionali. In Italia,

la zona Distretto di Firenze tende ad un modello di cure primarie di tipo *comprehensive Primary Health Care*, centrato sulle Case di comunità. Questo lavoro presenta i risultati e le riflessioni di un evento formativo multi e interprofessionale (*interprofessional education*), rivolto a professionisti sanitari, ricercatori e studenti coinvolti nella riorganizzazione dei servizi di cure primarie.

Metodi. L'attività è stata strutturata utilizzando un modello di apprendimento in quattro fasi (immaginativa, analitica, 'common-sense', dinamica), seguendo quattro attività distinte (brainstorming, lezione frontale, caso studio e progetto di gruppo).

Risultati. I temi salienti emersi hanno evidenziato l'importanza di coltivare relazioni tra i componenti del team, l'esigenza di un ambiente di lavoro inclusivo, il ruolo cruciale del coinvolgimento comunitario e della collaborazione tra diversi servizi e discipline e tra settori altri rispetto a quello socio-sanitario.

Discussione. Questi temi sottolineano gli aspetti essenziali delle pratiche di cure primarie orientate ai principi della *comprehensive Primary Health Care*. Gli spazi formativi di *Interprofessional Education* sono componenti indispensabili nel sostenere l'implementazione di processi di innovazione dei servizi di cure primarie e nel garantirne la sostenibilità. Questo studio sottolinea l'importante ruolo dell'*Interprofessional Education* nel colmare il distacco tra gli elementi teorici e la declinazione pratica, enfatizzando che i principi della *comprehensive Primary Health Care* si concretizzano in scenari del mondo reale.

References

1. World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). International Conference on Primary Health Care (1978: Alma-Ata, USSR) World Health Organization & United Nations Children's Fund (UNICEF). 1978. Available from: <https://www.who.int/publications/item/9241800011> [Last accessed: 2024 Jan 28].
2. World Health Organization (WHO). Declaration of Astana. WHO; 2018. Available from: <https://www.who.int/publications/item/WHO-HIS-SDS-2018.61> [Last accessed: 2024 Jan 28].
3. OECD. Strengthening the frontline: How primary health care helps health systems adapt during the COVID 19 pandemic. OECD Publ. 2021;(February). Available from: https://read.oecd-ilibrary.org/view/?ref=1060_1060243-snyxeld1ii&title=Strengthening-the-frontline-How-primary-health-care-helps-health-systems-adapt-during-the-COVID-19-pandemic [Last accessed: 2024 Jan 28].
4. Maeseneer M, Willems S, De Sutter M, Van de Geucchte I, Billings M. Primary health care as a strategy for achieving equitable care: a literature review commissioned by the Health Systems Knowledge Network. [Internet]. 2007. Available from: www.who.int/social_determinants/resources/csdh_media/primary_health_care_2007_en.pdf?ua=1 [Last accessed: 2024 Jan 28].
5. World Health Organization (WHO). The World Health Report 2008: primary health Care - Now more than ever [Internet]. Vol. 26, The World Health Report. 2008. Available from: <https://apps.who.int/iris/handle/10665/43949> [Last accessed: 2024 Jan 28].
6. Baum FE, Legge DG, Freeman T, Lawless A, Labonté R, Jolley GM. The potential for multi-disciplinary primary health care services to take action on the social determinants of health: Actions and constraints. *BMC Public Health*. 2013 May 10;13: 460. doi: 10.1186/1471-2458-13-460.
7. Altschuler J, Margolius D, Bodenheimer T, Grumbach K. Estimating a reasonable patient panel size for primary care physicians with team-based task delegation. *Ann Fam Med*. 2012;10(5):396-400. doi:10.1370/afm.1400.
8. Shipman SA, Sinsky CA. Expanding primary care capacity by reducing waste and improving the efficiency of care. *Health Aff*. 2013;32(11):1990-1997. doi:10.1377/hlthaff.2013.0539.
9. Willard-Grace R, Hessler D, Rogers E, Dubé K, Bodenheimer T, Grumbach K. Team structure and culture are associated with lower burnout in primary care. *J Am Board Fam Med*. 2014;27(2):229-238. doi:10.3122/jabfm.2014.02.130215.
10. Pany MJ, Chen L, Sheridan B, Huckman RS. Provider teams outperform solo providers in managing chronic diseases and could improve the value of care. *Health Aff*. 2021;40(3):435-444. doi:10.1377/hlthaff.2020.01580.
11. Kong M, Bodenheimer T. Primary Care Urgently Needs Support for Interprofessional Teams. *Perm J*. 2022;26(4):100-103. doi:10.7812/TPP/22.105.
12. Bentley M, Freeman T, Baum F, Javanparast S. Interprofessional teamwork in comprehensive primary healthcare services: Findings from a mixed methods study. *J Interprof Care*. 2018;32(3) :274-283. doi:10.1080/13561820.2017.1401986.
13. Pype P, Mertens F, Helewaut F, Krystallidou D. Healthcare teams as complex adaptive systems: Understanding team behaviour through team members' perception of interpersonal interaction. *BMC Health Serv Res*. 2018;18(1):570. Published 2018 Jul 20. doi:10.1186/s12913-018-3392-3.
14. Frenk J, Chen L, Bhutta ZA, Cohen J, Crisp N, Evans T, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet*. 2010;376(9756):1923-1958. doi:10.1016/S0140-6736(10)61854-5.
15. World Health Organization (WHO). WHO Global Strategy on People-Centred Integrated Health Services: Interim Report. Service Delivery and Safety. 2015.
16. World Health Organization (WHO). Framework for Action on Interprofessional Education & Collaborative Practice. Practice. 2010.
17. Frenk J, Chen LC, Chandran L, Groff EOH, King R, Meleis A, et al. Challenges and opportunities for educating health professionals after the COVID-19 pandemic. *Lancet*. 2022;400(10362):1539-56. doi: 10.1016/S0140-6736(22)02092-X.
18. Haghani F, Asgarimoqadam M, Yamani N, Alavijeh A. The effect of interprofessional education on interprofessional performance and diabetes care knowledge of health care teams at the level one of health service providing. *Adv Biomed Res*. 2014;3:153. Published 2014 Jul 31. doi:10.4103/2277-9175.137861
19. Peduzzi M, Agreli HF. Teamwork and collaborative prac-

- tice in primary health care. *Interface*. 2018;22:1525–34. doi: 10.1590/1807-57622017.0827.
- 20. Agreli HF, Peduzzi M, Silva MC, Mascarelle RCV, Espinoza P. Effects of interprofessional education on teamwork and on knowledge chronic conditions management . *Rev Lat Am Enfermagem*. 2019;27:e3203. Published 2019 Oct 28. doi:10.1590/1518-8345.3095.3203.
 - 21. Franco TB, Merhy EE. O reconhecimento de uma produção subjetiva do cuidado. In: Trabalho, produção do cuidado e subjetividade em saúde: textos reunidos. São Paulo: Hucitec; 2013: 151–71.
 - 22. Homeyer S, Hoffmann W, Hingst P, Oppermann RF, Dreier-Wolfgang A. Effects of interprofessional education for medical and nursing students: Enablers, barriers and expectations for optimizing future interprofessional collaboration - a qualitative study. *BMC Nurs*. 2018;17:17:13. Published 2018 Apr 10. doi:10.1186/s12912-018-0279-x.
 - 23. Barreto L da SO, Guimarães Campos VD, Dal Poz MR. Interprofessional education in healthcare and health workforce (HRH) planning in Brazil: experiences and good practices. *J Interprof Care*. 2019;33(4):369-381. doi:10.1080/13561820.2019.1646230.
 - 24. Milani C, Naldini G, Baggiani L, Nerattini M, Bonaccorsi G. How to promote changes in primary care? The Florentine experience of the House of Community. *Front Public Heal*. 2023;11:1216814. Published 2023 Sep 5. doi:10.3389/fpubh.2023.1216814.
 - 25. McCarthy B. Using the 4MAT System to Bring Learning Styles to Schools. *Educ Leadersh*. 1990;48(2):31-37. ISSN: ISSN-0013-1784.
 - 26. Kolb AY, Kolb DA. Learning styles and learning spaces: Enhancing experiential learning in higher education. *Acad Manag Learn Educ*. 2005;4(2):193-212. <http://www.jstor.org/stable/40214287>.
 - 27. Knowles MS, Holton III E, Swanson RA, Robinson PA. The Adult Learner - The Definitive Classic in Adult Education and Human Resource Development. 9th ed. London: Routledge, editor; 2020. 406 p.
 - 28. Mohin M, Kunzwa L, Patel S. Using mentimeter to enhance learning and teaching in a large class. *Int J Educ Policy Res Rev*. 2022;9(2):48-57. doi:10.15739/IJEPRR.22.005.
 - 29. Denzin NK, Lincoln YS. The SAGE Handbook of Qualitative Research. 5th ed. . Vol. 195. SAGE Publications; 2018.
 - 30. van Dongen JJ, van Bokhoven MA, Goossens WNM, Daniëls R, van der Weijden T, Beurskens A. Development of a customizable programme for improving interprofessional team meetings: An action research approach. *Int J Integr Care*. 2018;18(1):98-106. doi:10.1093/fampra/cmw106.
 - 31. Baerheim A, Ness IJ. Reflexivity and expansive learning theory in interprofessional workplace learning. *J Interprof Care*. 2021;35(6):878-883. doi:10.1080/13561820.2020.1826414.
 - 32. Baerheim A, Ødegaard EE, Ness IJ. Team reflexivity and the shared mind in interprofessional learning. *Policy Futur Educ*. 2023;21(2). doi:10.1177/14782103221094353.
 - 33. IPEC IEC. Core competencies for interprofessional collaborative practice: 2016 update. Washington, DC: Interprofessional Education Collaborative; 2016.
 - 34. Ward M, Schulz AJ, Israel BA, Rice K, Martenies SE, Markarian E. A conceptual framework for evaluating health equity promotion within community-based participatory research partnerships. *Eval Program Plann*. 2018;70:25-34. doi:10.1016/j.evalprogplan.2018.04.014.
 - 35. Parker M, Wallerstein N, Duran B, Magarati M, Burgess E, Sanchez-Youngman S, et al. Engage for Equity: Development of Community-Based Participatory Research Tools. *Heal Educ Behav*. 2020;47(3):359-371. doi: 10.1177/1090198120921188.
 - 36. Magzoub MEMA, Schmidt HG. A taxonomy of community-based medical education. *Acad Med*. 2000;75(7):699-707. doi:10.1097/00001888-200007000-00011.

Supplementary Material S1

Below is the full text of the case provided to the groups for work; it is divided into two parts, provided at different times to stimulate reflection.

Case Study – 1st Part

It's Monday morning, and Silvia, a primary care physician, is in a general practice clinic when she receives a call from the territorial nursing service. Mirko, a family nurse practitioner, informs her that he is in charge of one of his patients, 81-year-old Alberto. Mirko adds that Alberto was admitted to the emergency room (ER) over the weekend after a fall at home, resulting in a leg injury. The fall likely occurred during an episode of psychomotor agitation. Mirko also mentions that he plans to visit Alberto in the morning to continue hydration therapy. Finally, Mirko reports that he has already reached out to the contact person, his 72-year-old partner Anna, who mentioned that this is the second ER visit in the last month. Mirko asks Silvia if she has any additional useful information.

Silvia mentions that she hasn't seen Alberto and Anna at the outpatient clinic for about a year, but they've been consistently taking prescribed therapy. Alberto's therapy includes psychotropic, antihypertensive, anti-aggregant, and oral hypoglycemic medications. She also recalls a geriatric consultation from about a year ago, conducted privately, where cognitive impairment with initial behavioral disturbances was diagnosed. However, she cannot find a record of the scheduled re-evaluation. Additionally, Alberto has type II diabetes mellitus, arterial insufficiency, and had an ischemic stroke some time ago, resulting in motor limitations. Silvia notes that she hasn't received notifications of recent ER admissions and suggests that Mirko updates her for a possible joint evaluation.

Case Study – 2nd Part

Anna is the primary caregiver for Alberto. They met after both going through divorces. Alberto has a grandson who moved to London for work about a year ago, while Anna has a daughter who recently had a baby girl. For the past three months, they've hired someone to assist with Alberto's care for two hours a day, Monday through Friday. Anna faces challenges in getting around, especially with Alberto, and relies on her daughter or public transportation since she doesn't have a driver's license.

A few days later, Silvia decides to visit their home with Mirko. Alberto and Anna live on the third floor of an apartment building in the same neighborhood as the outpatient clinic. Anna explains that in recent months, managing the situation at home has become increasingly difficult. She's attentive to Alberto but visibly tired. Alberto has been experiencing frequent episodes of agitation, particularly at night, during which he becomes aggressive and refuses to take his medication. Due to this, Anna has had to contact the continuity of care service several times. During the latest episode of agitation, Anna called 112 due to Alberto's leg injury and the difficulty in calming him down.

Guiding questions - analysis grid

What are the determinants of Albert's health, and how do they impact his ability to meet his needs?	What resources would you activate from the local area/community/living context?
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