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Exploring user experiences in a novel primary care center: a qualitative grounded theory study

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Abstract

Background Primary care serves as the initial point of healthcare contact; however, the shortage of general practitioners can threaten equitable access to primary care, necessitating innovative models. In a district in the north of Italy, an alternative primary care model, as a primary care center (PCC), has been established to care for citizens unattached to a general practitioner. We aimed to explore the users' experience with the novel alternative primary care model.

Methods We conducted a qualitative study using a grounded theory approach. We interviewed a total of 33 participants, including 25 patients and eight informal caregivers.

Results Findings suggest a core concept of the "Patient experience process at the PCC as a dynamic and interconnected journey" that unfolds in three interconnected themes, starting from "Living the care pathway at the PCC ", progressing to "Evaluating the care pathway at the PCC", and concluding with "Drawing conclusion on the PCC". Patients transitioned through these phases as they interact with healthcare professionals, reflect on the quality of care, and make informed decisions regarding their preferences. Findings indicate that the transition from a general practitioner to the PCC is often marked by uncertainty and frustration, primarily due to the lack of structured handovers and clear service explanations. However, effective communication, proactive follow-up, and home visits by healthcare professionals significantly enhance patient satisfaction and trust in the PCC model. Nurses emerge as central figures in ensuring continuity of care and holistic support, while multidisciplinary collaboration fosters comprehensive and personalized care. Patients critically assess their care experiences, weighing the benefits of PCC services against their previous GP experiences. While many patients appreciate the structured and multidisciplinary nature of PCC care, some still prefer a dedicated GP for continuity and familiarity. Digital health solutions, including telehealth and remote monitoring, are recognized as useful additions but require careful integration to avoid reducing human interaction and address potential barriers for older people needing support from informal caregivers.

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Conclusion Our study underscores the importance of effective communication, proactive follow-up, multidisciplinary care, and continuity of care to ensure a positive user experience satisfaction when delivering primary care to patients unattached to a GP through a new alternative primary care model.

Keywords Primary care, General practice, Multidisciplinary care, Model of care, Equity, Nursing

Background

Primary care is the initial point of contact for healthcare services [1], and equal access is crucial to ensure and improve population health and reduce costs since disparities exacerbate health inequities, particularly for vulnerable groups [2].

Most European countries have adopted publicly funded models centered on comprehensive, coordinated, patient-centered care led by general practitioners (GPs) and supported by team-based approaches involving nurses [3–6].

However, a global shortage of GPs, driven by retirements, recruitment challenges, and increasing workloads, hampers equitable care delivery. In systems where citizens are assigned to GPs, this shortage results in many people lacking a designated GP, leading to delayed care and worse health outcomes [7, 8]. Therefore, innovative primary care models are needed to ensure continued access to high-quality primary care and care coordination, especially for underserved and vulnerable populations [7, 8].

To address these shortages, various studies have explored alternative primary care models. In Canada, centralized waiting lists (CWLs) have been introduced to allocate unattached patients to primary care providers based on urgency and availability [9, 10]. Similarly, community pharmacists have played an increasingly important role, providing accessible care and supporting both attached and unattached patients [11, 12]. Models such as nurse-led clinics and temporary access centers have also been implemented to address local needs [5, 10, 13].

In Italy, where adults aged over 14 years are assigned to a GP providing care for roughly 1500–1800 citizens [14], the shortage of GPs has led to an increasing amount of people being unattached to GPs, limiting access to primary care. To address this issue, in a rural area of a district in North Italy, an alternative primary care model has been implemented in a Primary Care Center (PCC) involving family and community nurses and out-of-hours physicians.

While alternative solutions discussed in the literature have demonstrated potential in improving access to care, evidence on multidisciplinary alternative approaches and patient experience of these care pathways remains limited, especially in Europe [13, 15]. This gap exists largely because studies examining patients' perceptions have predominantly focused on traditional primary care models [16–18], stakeholders' perspectives [9, 10], or patients' experience of being unattached [12, 19] rather than the experience of an alternative model of care. One exception is the role of a pharmacist in supporting both attached and unattached patients [11]. Furthermore, no experiences comparable to the innovative Italian model have been identified in the existing literature.

Therefore, this study aims to explore the experiences of patients unattached to a GP and receiving care through an alternative multidisciplinary primary care model.

The results will inform the development of a new primary care model, guided by co-design principles that actively involve patients to ensure services are effective, acceptable, and sustainable [20]. This approach aligns with person-centered care, prioritizing individuals' values, preferences, and experiences. The study will contribute to knowledge on person-centered care and public perceptions of health services, offering insights into improving access, continuity, and quality of primary care. It also provides guidance for policymakers and clinicians worldwide as healthcare systems address similar challenges, such as primary care professional shortages and the need for innovative delivery models.

Methods

Research question

We have defined the following research question: How do users conceptualize their experience with the PCC as an alternative primary care model to GPs?

Design and setting

We conducted a qualitative study with a grounded theory approach [21]. Grounded theory was chosen for its ability to capture the complex, multifaceted, and dynamic nature of user experiences in healthcare, shaped by individual needs, system structures, and sociocultural factors [22]. We have adhered to the reporting guideline COREQ - Consolidated criteria for reporting qualitative research [23].

The study was conducted in a Primary Care Center (PCC) in a district in the North of Italy. The novel PCC consists of a multidisciplinary team composed of two family and community nurses and 12 out-of-hours service physicians who are not general practitioners. Citizens are assigned to the PCC and can be cared for by different physicians in shifts according to the urgency of the need. The PCC operates from 8 am to 8 pm, and citizens can access it with appointments. The physicians are self-employed, paid under national and local contracts on public funding, and work on daily shifts in pairs. A third

physician service is available to manage health needs by phone calls. Family and community nurses are registered nurses with a one-year university master's degree in Family and Community Nursing and previous experience in home care. They work in pairs on a daily shift and primarily manage patients with chronic conditions, functional disabilities, leg ulcers, and social difficulties, such as isolation, poor hygiene, and poverty. They provide structured patient education and proactive follow-up through outpatient care, home visits, and phone calls to promote self-care and medication adherence and prevent clinical and social complications.

Population

We conducted initial and theoretical sampling using the grounded theory approach [21]. In the initial sample, we used a convenience sample to recruit patients and informal caregivers who met the following inclusion criteria: have been cared for by the PCC for at least three months or being an informal caregiver of a patient cared for by the PCC for at least three months; have accessed both physicians and nurses; aged > 18 years; speaking Italian; willing to participate. No other limits at the age, chronic conditions, length of period in care by PCC, or number of accesses to PCC were posed to rely on a maximal variation sampling to gather a variety of perspectives.

As our analysis progressed, we adopted a theoretical sampling since we had developed some categories that were still analytically thin and insufficiently supported, and the hypothesis that emerged from the analysis on the relationships between categories was still indistinct but suggestive [21]. Therefore, we changed some of the inclusion criteria to include patients and informal caregivers who were followed for less than three months by the PCC and who could have access only to physicians, nurses, or both.

Participants were invited to contact researchers to participate in the study through nurses and a flyer in the waiting room at the PCC. The process of recruiting participants continued until categories and relationship saturation according to the principle of theoretical sampling [21].

Data collection

In the initial sampling phase, semi-structured interviews were planned with patients irrespective of their access to the PCC and conducted either at the patients' homes or at the PCC, as participants' convenience. During the theoretical sampling phase, two researchers were stationed in a designated room within the PCC on five randomly selected mornings over a two-week period. Participants could choose to participate in the study either spontaneously or upon recommendation by professionals.

Interviews were conducted by two nurse researchers (PhD, PhD student) unknown to participants following a semi-structured guide developed for this study (Supplementary File 1). The guide was piloted in two interviews, one for each sample, with no need for changes. Interviews lasted from 20 to 90 min, were audio-recorded, transcribed verbatim to a Word file, and anonymized.

Data analysis

We performed open, focused, and theoretical coding [21]. The coding process began with line-by-line open coding by four researchers (J.L., E.M., F.C., E.A.) for the first five interviews and two researchers (J.L., E.M.) for the rest, using Ligre, a web tool for qualitative data analysis. This phase emphasized preserving actions, grounding in data, and identifying patterns through constant comparison. Focused coding then refined prominent initial codes into categories and themes. Memo writing and ongoing comparison supported hypothesis development and researcher discussions. The four researchers (J.L., E.M., F.C., E.A.) later reviewed and validated the analysis, resolving discrepancies and advancing to theoretical coding. Visual mapping helped refine hypotheses, explore relationships among categories and themes, and build a cohesive core concept capturing users' experiences with PCC. Data collection and analysis proceeded simultaneously until theoretical saturation, following Charmaz's principles [21].

Rigor and trustworthiness were ensured by employing memos allowing for deep immersion in the data, reflexivity on biases, hypothesis generation, and exchange among researchers, refining categories for theory development [21]. Trustworthiness was maintained through constant data comparison, detailed memo writing, coding, and theoretical saturation. In addition, four researchers (J.L., E.M., F.C., E.A.) participated in data collection and analysis to compare interpretations from multiple perspectives. Categories and the final theory about the experience process were validated through feedback from academic and clinical colleagues.

Ethical aspects

The study has been approved by the Regional Ethical Committee Board (15680 del 11/03/2024), ensuring compliance with ethical standards for research involving human subjects. Prior to participation, patients provided written informed consent. All data collected have been anonymized. The study respects the principles outlined in the Declaration of Helsinki and data processing and storage comply with the General Data Protection Regulation (GDPR), ensuring confidentiality, security, and restricted access to personal information.

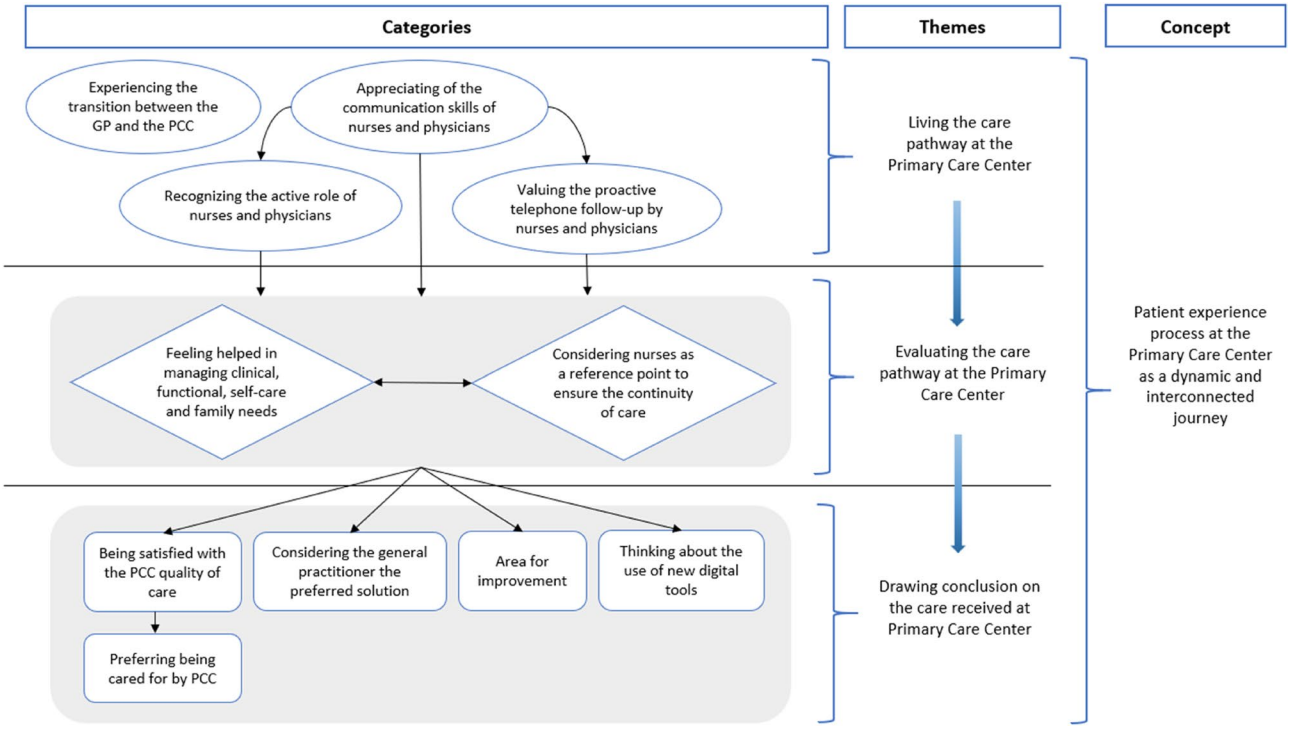

Fig. 1 The conceptual framework of patients' experience of being cared for by the Primary Care Center

Results

Twenty-five patients and eight caregivers were interviewed. The mean age of patients was 72 (SD 6.2) years, and 10 were female (40%). The mean age of caregivers was 53 (SD 4.2) years, and 7 were female (87%). Overall, 30 participants were affected by at least one chronic disease (median 3, IQR 2–4). among hypertension (21, 70%), chronic heart disease (16, 53.3%), diabetes (12, 40%), atrial fibrillation (13, 43%), chronic obstructive pulmonary diseases (7, 23.3%) chronic kidney disease (5, 16.6%), asthma (4, 13.3%), and Parkinson (2, 6.7%). Three patients had no chronic diseases and accessed the PCC for acute health issues. Participants were attached to PCC from a median of 12 months (IQR 6 months – 18 months) and accessed the PCC nine times on average (IQR 5–12).

The experience process that emerged consisted of a core concept of the "Patient experience process at the Primary Care Center as a dynamic and interconnected journey" that unfolds in three interconnected themes. The process starts with direct experience ("Living the care pathway at the Primary Care Center "), progresses to critical reflection ("Evaluating the care pathway at the Primary Care Center"), and concludes with informed judgment ("Drawing conclusion on the Primary Care Center") (Fig. 1). In the first phase, "Living the care pathway at the Primary Care Center", participants referred when they actively engaged with the PCC, including the transition from GP to PCC, the interactions with PCC professionals, and navigation of the new care pathway at the PCC, where participants encounter its strengths and challenges, such as service accessibility, communication, and care coordination. As participants described accumulated experiences, they proceeded to critically reflect on them, constituting the second theme, "Evaluating the care pathway at the Primary Care Center". Evaluation refers to satisfaction with the quality of care, the professionalism of staff, and the efficiency of services. The final third theme "Drawing conclusion on the primary care center", represents a resolution, where participants synthesized their experiences and evaluations to form conclusions about the PCC. Participants decided whether the PCC met their needs and expectations or whether adjustments were necessary for optimal care delivery, declaring their preference for the care model, whether favoring the PCC or GPs. Each phase naturally leads into the next as participants gain more insight and perspective. This is not a static journey but a learning process, where experiences accumulate over time, influencing perceptions and preferences.

Theme: Living the care pathway at the primary care center

This theme, as the starting point of the experience process, includes four categories called "Experiencing the transition between the GP and the PCC", "Appreciating communication skills of HCPs", "Valuing the proactive telephone follow-up by HCPs", and "Recognizing the active role of HCPs" (Fig. 1).

Experiencing the transition between the GP and the PCC

Individuals expressed negative thoughts about transitioning from GP to PCC, which was characterized by uncertainty and discomfort, particularly when there was a lack of a structured handover.

> *The transition to PCC was frustrating because my previous GP did not forward my medical records to the PCC [...] And it was a significant problem because we had to rebuild and start explaining everything again (ID2, patient, 72 years old).*

Participants reported confusion when they were referred to the PCC, complaining of a lack of awareness and information about the service. Many stated that they only learned about the PCC through hospital staff or after seeking urgent care. Others described frustration stemming from difficulties in finding a new GP, which led them to turn to the PCC for support. Participants suggested implementing structured informational sessions to guide individuals in using the service effectively.

> *I came through the out-of-hours doctor and found out I was assigned to the PCC. I didn't know, I never really understood when this PCC was established or what it was for. (ID10, patient, 70 years old)*

Several patients expressed feeling forced to rely on the PCC due to limited alternatives and described it as a temporary solution while awaiting registration with a new GP.

> *It's been about a year now since we didn't have a GP anymore, so we were assigned here until a new one is available (ID 7, patient,77 years old).*

Appreciating communication skills of healthcare professional

Participants appreciated the kindness and communicative style of healthcare professionals, highlighting the importance of compassion and clear interactions. They valued nurses and physicians for asking detailed questions about their stories and needs, feeling understood through active listening, and considering the PCC as a source to gather and check out information to manage health issues.

> *These doctors don't just stop at what you tell them—they go deeper. They examine you, ask questions, and really try to understand your feelings. Like when I mentioned my back pain, he also asked about my stomach. I said I wasn't taking anything, and he was surprised. He didn't just prescribe something and move on. That makes me feel very reassured (ID16, patient, 75 years old).*

Nurses were praised for providing reassurance and comfort through empathic conversations, a contrast to previous experiences with GPs. Participants highlighted positive experiences when seeking information from nurses, particularly noting the quality and helpfulness of the advice provided, including through phone consultations. They emphasized the pivotal role of nurses in delivering not only medical assistance but also valuable guidance on self-care that effectively complemented the care offered by doctors.

> *I called the nurse because my mother had purple skin on her leg and she gave me a lot of advice on how to manage the leg...she gives more assistance than the doctor on this matter, because honestly with her I have more information, reassurance and advice that I didn't receive with my previous GP (ID7, patient, 77 years old).*

Valuing the proactive telephone follow-up by healthcare professionals

Participants were highly satisfied with nurses and physicians who proactively called to check on their health or that of their relatives, creating a sense of personalized care and demonstrating a proactive care approach.

> *They called at home— 'How are you? How are you feeling?' At the time, it felt like a dream for someone in need (ID10, patient, 70 years old).*

They appreciated when follow-up calls were scheduled, and professionals consistently adhered to them, showing organized and timely care.

> *For example, they call when they think it's necessary—like the nurse said, 'I'll call you back in seven days,' and after seven days she did, to check how we were doing and if we were taking the medicine (ID14, caregiver, 61 years old).*

However, they also valued the flexibility to adapt follow-ups to individual patient needs, providing a tailored care experience. Participants emphasized the importance of nurses assessing health status and self-care beyond addressing medication concerns, highlighting the holistic nature of care. They also valued follow-up calls from doctors, emphasizing the importance of a multidisciplinary approach.

> *I really appreciate that the nurse and the doctor call home spontaneously to anticipate needs, ask how I am, if I need anything... above all the nurses reassure me, and it is sometimes more relieving than a drug (ID19, patient, 82 years).*

Recognizing the active role of healthcare professionals

Informal caregivers appreciated home visits, recognizing the convenience and personalized nature of home care for the elderly. They appreciated the efforts of nurses and physicians to be joint and consistent in conducting home visits, emphasizing the importance of maintaining continuity of care, especially in addressing issues such as wounds and acute health problems. Relevance has been attributed to home visits, especially after the discharge of a family member unable to move independently, when receiving essential care during a vulnerable period.

> *I appreciated that they always guaranteed the same doctor at home for my elderly mother and the joint doctor-nurse home visits because they facilitated continuity of care and assistance on many fronts, not just therapy (ID14, caregiver, 61 years old).*

Participants emphasized the importance of active monitoring of electronic patient documentation during hospitalizations by PCC professionals for seamless care. In addition, they appreciated the continuity of care with effective handovers, even with changes in medical staff. Patients felt their needs were comprehensively addressed, praising the physicians' effective specialist referrals and coordinated approach. Satisfaction was high, particularly with professionals who successfully managed long-standing pain where previous providers had failed.

> *I found professionals who were able to cure my chronic pain after years of suffering and failure in the care I received from others (ID10, patient, 70 years old).*

Theme: Evaluating the care pathway at the primary care center

This theme, as the intermediate step of conceptualization of the experience process, includes two categories called "Considering nurses as a reference point to ensure continuity of care" and "Feeling.

helped in managing clinical, functional, self-care and family needs" (Fig. 1).

Considering nurses as a reference point to ensure continuity of care

Participants emphasized the crucial role of nurses as the primary point of contact at the PCC and in ensuring continuity of care, managing issues, and coordinating the care pathway, by acting as intermediaries between patients and doctors, organizing home visits and updating physicians on referrals and patient needs. Their support was highly appreciated, and patients felt secure in their hands.

> *I recognize in the nurse who cares for me the ability to lead my health path and to solve problems, both of coordination with the various specialists and health services, and of health problems over months (ID4, patient, 67 years old).*

Feeling helped in managing clinical, functional, self-care and family needs

Participants frequently reported positive experiences with nurses in managing health issues. They valued the monitoring of chronic conditions, as it provided a sense of security and enabled timely interventions and appreciated the convenience of nurses remotely monitoring vital signs, particularly blood pressure, which facilitated efficient and proactive care.

> *The nurse asked me to fill in the blood pressure diary and check it every time, even over the phone (ID9, patient, 69 years old).*

Participants felt supported when nurses actively assisted with medication and diet management, offering advice, clarifying therapy plans, and educating on adherence to prescribed treatments and diagnostic exams. Nurses were also praised for identifying and arranging necessary aids and devices, such as beds and diapers, even when these had not yet been prescribed.

> *Nurses recognized my need for diapers and a medical walker. I had never known by my previous GP to have the right to receive these aids free of charge with a medical prescription, and I was a little bit angry because I had bought diapers for years with my money. I'm profoundly grateful to these nurses because having these aids has changed my life economically and functionally in daily life (ID15, patient, 79 years old).*

Prompt responses from professionals to urgent needs also foster a sense of security and trust among patients and timely communication was highlighted as fundamental.

Nurses were also recognized for preventing future difficulties for families, such as by expediting requests for nursing home admissions.

> *Even now, for my husband's disability paperwork, and to find a place in a care home in case my health gets worse… she got involved and they helped me a lot (ID2, patient, 72 years old).*

Theme: drawing conclusion on primary care center

This theme, as the last phase of the conceptualization of the experience process, includes five categories, namely "Being satisfied with the quality of care at primary care

center", "Identifying the GP as the preferred option", "Identifying the primary care center as the preferred option", "Area for improvement of primary care center", and "Thinking about the use of new digital tools" (Fig. 1).

Being satisfied with the quality of care at primary care center

Participants expressed strong appreciation for the well-organized care provided by the PCC, which exceeded their initial low expectations. Overall satisfaction was high, with few suggestions for improvement. They praised the competence of both physicians and nurses, highlighting the quality of care during home visits and the crucial role of the nursing staff. The expertise of physicians emerged as a key factor driving patient satisfaction.

> *Despite their young age and not having a single attributed doctor, PCC doctors are truly competent and attentive in thoroughly searching for the causes of your problems. I felt safe in their hands (ID17, caregiver, 56 years old).*

Participants valued the positive relationships with physicians and nurses, attributing them to the providers' deep understanding and familiarity with their medical histories. This personalized approach, rooted in strong knowledge of individual patient backgrounds, significantly enhanced satisfaction with the healthcare service.

Identifying the GP as the preferred option

After months with the PCC, some participants prefer the GP model. Dissatisfaction with the PCC includes extended wait times of eight days for medication prescriptions, compared to quicker fulfilment by GPs. Despite positive experiences with the PCC, some missed the personalized connection with their former GP. Frequent physician rotations at the PCC disrupted continuity, prompting a few to seek private consultations with their previous GP. Participants appreciated having a designated primary care physician for convenience, family-centered care, and consistency.

> *If a new GP were available, I would switch because having a doctor who knows you allows for a very different relationship built on trust and confidence. At the PCC, you see different doctors at each visit, which I find unsettling. I want a doctor who knows me and my history, so I don't have to start from scratch every time I have a problem. (ID3, patient, 75 years old)*

Participants valued the assurance of the PCC's continued operation, noting that fears of its potential closure prompted some to consider switching to a GP. Geographic proximity also played a significant role in healthcare decisions, with participants indicating a preference for a GP only if conveniently located near their homes.

> *If a doctor comes back to my hometown, then yes, I'll go back to having a general practitioner there (ID7, patient, 77 years old).*

Identifying the primary care center as the preferred option

Most participants preferred the PCC model over the GP model, even if a new GP became available. Informal caregivers expressed concerns that new GPs might recommend hospitalization without conducting in-home examinations, as had occurred in the past.

> *There's a fear that the new GP might automatically suggest sending the elderly patient to the hospital without even coming to see them first (ID13, caregiver, 62 years old).*

They viewed GPs as overburdened, unable to provide adequate care or in-person visits for acute issues, and prone to making quick assessments without necessary medical readings.

> *"Honestly, I'd rather stay here [at the PCC]... because to me, general practitioners have become like office workers". "What do you mean?" "They've become office workers in the true sense of the word. In eight years with my last doctor, he checked my blood pressure maybe three times, never gave me a proper check-up. You go there, say what's wrong, and he just says, 'Take this,' or sends you for tests... that's it" (ID20, patient, 76 years old).*

Patients favored the PCC due to faster waiting times, perceived greater professionalism, and the convenience of home visits by PCC staff, which enhances overall healthcare quality. Patients are reluctant to seek alternative GP care in the future, expressing a preference for PCC driven by fears of starting anew with a GP unfamiliar with their medical history and lacking an interdisciplinary approach.

> *I prefer being cared for by PCC because physicians dedicate more time to understanding your needs and physically examining your clinical signs. In addition, you can benefit from multidisciplinary care with nurses who are invaluable for helping you manage problems and access health services (ID3, patient, 75 years old).*

Area for improvement of the primary care center

Several participants underscored the need for team stability to manage chronic and complex patients as a potential area for improvement, to maintain a consistent relationship with a physician who oversees their entire medical journey.

Participants further emphasized the importance of service proximity to the patient's community, underscoring the value of having a local physician who could support both the patient and their family.

> *It would be beneficial to establish additional PCCs closer to rural towns, which are currently far from this location. This would make it easier for people like me, who are elderly and have limited ability to drive, to access PCC services and receive better care (ID21, patient, 78 years old).*

In addition, some participants expressed a preference for open access to physician visits without appointments.

> *In the past, you could go to your GP without an appointment — you went whenever you wanted. Maybe that's what's missing now. Being able to say, 'I'll just go today and see the doctor.' Something more practical (ID4, patient, 67 years old).*

Thinking about the use of new digital tools

Participants valued the potential integration of telehealth solutions, including video calls and digital tools, as a means to enhance the PCC model. Attitudes toward technology varied, with some expressing willingness to use video calls and transmit vital signs digitally. Others were open to trying technological solutions but maintained a preference for in-person visits for direct communication and examinations. Participants noted that the perceived utility of video calls depended on the severity of health issues, viewing them as suitable primarily for non-serious concerns.

> *I believe I could be cared for through video calls for non-urgent needs. But when you need a clinical examination, for example, checking your swollen ankles, blood pressure, or shoulder pain, face-to-face visits are more appropriate to make a diagnosis and express your needs (ID16, patient, 75 years old).*

Participants reported that the support of informal caregivers in using digital tools was essential, particularly for older and disabled individuals, but noted that this added strain to the caregivers' responsibilities.

> *Yes, that would be fine [digital tool], but either my sister or I would always need to be there, because our mom doesn't have a phone that can make video calls. She has a landline, but she wouldn't be able to handle a smartphone if she were alone at home. So, one of us would always need to be there (ID12, caregiver, 58 years old).*

In addition, some resisted using technology due to unfamiliarity with smartphones and concerns about misusing video call features. These patients preferred traditional methods and direct human interaction, citing feelings of inadequacy and insecurity with new technologies.

> *"I see — and what about video calls?" "No, I don't use a mobile phone." (ID20, patient, 76 years old).*

Discussion

Main results

This study investigated the experience process of patients and informal caregivers unattached to a GP and cared for by a multidisciplinary team composed of out-of-hours physicians and family and community nurses in a PCC as an alternative primary care solution to the shortage of GPs. The core concept that emerged describes the patient experience process at the Primary Care Center as a dynamic and interconnected journey that unfolds in three interconnected themes. In the first part of the process identified from our study, when participants described how they lived the experience, it emerged that the transition from GP care to PCC caused frequent apprehension and discomfort due to a lack of structured handover and unfamiliarity with PCC services. The main issue was the lack of a structured electronic health record accessible to professionals causing an incomplete medical record transfer. The frustration and confusion reported by participants in transitioning from GP to PCC align with findings from studies on centralized waiting lists in Canada and organizational innovations in Quebec that highlighted challenges in system navigation and the emotional burden of being unattached or transitioning care [11, 13]. However, our study has shed new light on the information gap caused by inadequate initial communication about PCC services, leading to the understanding of the role of the PCC as a primary challenge, limited patient awareness, and delayed access.

Despite initial frustrations on the transition, patients highlighted the crucial role of professionals in shaping positive experiences at the PCC. They value the kindness, empathy, and effective communication skills of HCPs, including listening actively and providing reassurance. These results are in line with previous studies reporting that patients valued good communication even more than accessibility both in traditional GP models and in the alternative primary care models [10, 16, 24–26]. In addition, our study, compared to those on

multidisciplinary alternative primary care services [12, 19], underscored the pivotal role of nurses in fostering trust and being recognized as primary communicators and care coordinators. Moreover, our study adds that patients' satisfaction was boosted by proactive and personalized follow-up phone calls from both nurses and physicians, which enhanced continuity of care and provided timely support. Furthermore, new results, even in comparison to studies on traditional models, refer to the importance of proactive interventions, such as planned follow-ups and home visits, particularly for elderly or immobile patients.

The process of experience continued to the evaluation of the lived care pathway. Participants highlighted the value of nurse-led care in providing advice, coordinating, and resolving issues within the care pathway. Nurses were described as a point of reference ensuring continuity of care and acting as intermediaries with physicians for care coordination. These results mirror the evidence indicates that registered nurses in primary care improve patient outcomes and satisfaction [6, 27] due to better communication and self-care guidance [5]. However, while nurses' role in reducing care fragmentation is well documented in studies on traditional models or advanced nurse practitioner models [16, 24], it did not emerge from studies on alternative multidisciplinary primary care models [10, 12, 19].

In addition, most informal caregivers stressed the importance of personalized multidisciplinary home visits, especially for elderly patients and those with mobility limitations.

The process of experience that emerged from our study concludes with drawing conclusions on the experience with PCC based on the lived care pathway and its evaluation. Regarding continuity of care, our study provides new and relevant results. Indeed, while previous studies on alternative multidisciplinary primary care models described the frustration of patients in not having a long relationship with the same professional [12, 19], our study revealed differing opinions between patients. Adults with acute health issues prioritized prompt resolution over consistent personnel. However, older people and those with chronic conditions viewed the lack of assignment to one physician as a weakness, leading to repeated information and missed patient knowledge. In addition, many participants reported a preference for PCCs, which was built on the perceived professionalism and multidisciplinary care, despite occasional frustrations with team instability, contrasting with stronger preferences for GP-led continuity in the Nordic and UK contexts [18, 28].

As regards the geographic proximity, similar to issues raised in studies from the UK and Greece [15, 28], geographic disparities in access to care remain a concern in our study. Participants in all contexts highlight the need for localized services to address inequities in rural or underserved areas, and our study further emphasizes the importance of creating geographically dispersed centers to alleviate access barriers for elderly and rural populations, a gap less frequently discussed in centralized models [10, 12, 13]. Regarding the area for improving digitalization, users in this study were generally open to digital technologies, but elderly individuals often require informal caregiver support, as noted in prior research [26, 29]. Different from other alternative models emphasizing the crucial role and general acceptance of telemedicine [10, 19], our study adds that older populations may struggle with advanced technology, thus adding strain on informal caregivers [30]. In addition, resistance to telehealth is driven by digital literacy concerns and a preference for face-to-face consultations, particularly for complex health needs.

Implications for practice and research

Considering the themes that emerged, this study contributes valuable insights into patients' experience of an alternative primary care model on how it can address gaps in access and continuity of care amidst GP shortages, generalizable to other contexts.

The findings suggest several key priorities to ensure quality and continuity of care when delivering primary care through an alternative model to traditional GP attachment.

First, implementing standardized health information systems is essential to improve the quality of transition handovers and continuity of care. This is supported by evidence showing that the adoption of interoperable technologies promotes smoother workflows, enhances patient experiences, improves medication safety, and reduces costs [31, 32]. In addition, streamlining transitions requires better informational campaigns for citizens about new services.

Second, strengthening nursing roles within interdisciplinary teams is important, as nurses consistently emerged as key figures in ensuring care coordination, maintaining continuity, and supporting patients across clinical, functional, and self-care needs.

In addition, structured and proactive follow-up, including phone-based interventions, is vital for improving care outcomes and user satisfaction. Prioritizing quality and continuity of care for elderly and chronic patients is crucial, achieved through consistent personnel, multidisciplinary home visits, and ensuring local access, reinforcing the need for tailored, accessible care models. Furthermore, our results advocate for flexible care models, where individuals requiring episodic acute care receive treatment from a rotating but prompting available pool of physicians, while older people and those with

chronic conditions are assigned to a consistent team of nurses and physicians.

Lastly, telehealth holds significant promise for non-urgent needs, but the study highlights barriers faced by elderly patients and their caregivers, emphasizing the need for tailored e-health strategies. Indeed, since telephonic and video-based consultations show no significant differences in clinical efficacy, patient satisfaction, or healthcare utilization [33], the necessity of transitioning elderly patients to more technologically advanced solutions remains unclear.

However, these implications should be interpreted with caution, taking into account the local organizational models of primary care and remuneration systems, as these factors may influence the feasibility of implementing an alternative primary care model.

Future research might provide additional evidence on the safety, effectiveness, and scalability of this type of alternative primary care model, investigating outcomes such as emergency department visits, rehospitalizations, clinical indicators, and overall health outcomes. These quantitative data could further support evidence-based planning of services.

Strengths and limitations

A possible limitation of this study is its specific context, which may affect the external validity of the results due to local policy, human, and resource characteristics. However, being a unique experiment in Italy, the data collected will aid in planning new services to ensure equal access to primary care amidst the shortage of general practitioners.

In addition, despite the qualitative approach offering valuable insights into patient perspectives and the feasibility of an alternative care model, it may provide a limited understanding of the broader impact. Integrating quantitative measures and cost-related outcomes would enhance the evidence base, supporting more comprehensive and informed policy recommendations.

However, the methodology represents the principal strength of this study. Grounded theory was chosen for its capacity to generate explanatory frameworks of complex processes, including a deep understanding of the hidden perceptions and underlying patterns influencing user experiences of healthcare services [22]. User experience with health services is shaped by psychological, social, physical, and spiritual needs, system structures, and interpersonal interactions and involves perceptions of care quality, accessibility, and communication, influenced by sociocultural and economic barriers [34–36]. These multifaceted influences make it essential to employ methodologies capable of capturing the dynamic nature of user experiences.

Conclusions

In conclusion, the findings underscore the necessity of incorporating key elements when implementing alternative primary care models to mitigate GP shortages in health systems that traditionally rely on a GP-citizen attachment model. These elements include effective communication, proactive follow-up, personalized care, and care coordination, which were consistently associated with the support of nurses in this study, emphasizing their crucial role in an alternative primary care model. The study also emphasizes the need for ongoing efforts to enhance continuity of care and multidisciplinary care for older people, including home visits, flexible care models, and a balanced introduction of telehealth.

Supplementary Information

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Supplementary Material 1.

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Authors' contributions

JL: Conceptualization, Methodology, Data curation, Visualization, Writing- Original draft preparation. FC: Conceptualization, Methodology, Formal analysis, Writing- Reviewing and Editing. EM: Conceptualization, Methodology, Data curation, Visualization, Writing- Reviewing and Editing. CL: Conceptualization, Methodology, Writing- Reviewing and Editing. LS: Conceptualization, Methodology, Writing- Reviewing and Editing. ADF: Conceptualization, Methodology, Writing- Reviewing and Editing. EA: Conceptualization, Methodology, Writing- Reviewing and Editing.

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Data availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

The study has been approved by the Regional Ethical Committee Board (15680 del 11/03/2024), ensuring compliance with ethical standards for research involving human subjects. Prior to participation, patients provided written informed consent. All data collected have been anonymized. The study respects the principles outlined in the Declaration of Helsinki and data processing and storage comply with the General Data Protection Regulation (GDPR), ensuring confidentiality, security, and restricted access to personal information.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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