

Integrating professionals in French multi-professional health homes: Fostering collaboration beyond the walls

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Abstract

Current evidence of the effectiveness of multi-disciplinary co-location for healthcare integration is mixed. This case study investigates a territorial healthcare project that is implemented across four French rural healthcare practices that co-locate multi-disciplinary healthcare practitioners. Two levels of collaboration were identified: (i) local, intra-team collaboration (i.e., care and prevention) and (ii) territorial, inter-team collaboration (i.e., patient therapeutic education and knowledge sharing). An analysis of 50 interviews with healthcare professionals uncovers important aspects of successful multi-disciplinary collaboration, which is an intermediary between co-location and care integration. By highlighting the social dimension of care integration, with a specific focus on the professional component of interpersonal integration, this study expands the theory of care integration by identifying three antecedents of multi-disciplinary collaboration: (i) prior general practitioner joint-practice experience, (ii) professional impetus (i.e., initiated by practitioners) and (iii) general practitioner peer group membership. Successful multi-disciplinary co-location and, in turn, collaboration offer a range of benefits to both patients and practitioners and advance progress towards promising perspectives, such as local competence transfer and territorial contagion.

Keywords

care integration, co-location, multi-disciplinary collaboration, rural healthcare, team-based practice

Introduction

Many European countries are currently experiencing shortages in primary healthcare, particularly in rural areas.¹ Policymakers have responded to this shortage by encouraging general practitioners (GPs) to integrate their practices with those of other healthcare practitioners (e.g., nurses, social workers and other healthcare specialists) to create primary care centres (PCCs).^{2,3} Although PCCs are widely considered to be an effective way of meeting primary healthcare needs in rural areas,⁴ empirical evidence of the effectiveness of co-locating multi-disciplined professionals in a single healthcare facility (care integration) is mixed.^{2,5} It is, therefore, crucial to investigate the effectiveness of care integration,⁶ especially in rural areas.⁷ This study will explore multi-disciplinary healthcare teams in rural French PCCs, aiming to identify key factors of success.⁸

As an organisational strategy, co-location brings together in the same workplace practitioners that have a diverse range of expertise.^{2,9} However, co-location

does not necessarily lead to collaboration.⁹ Collaboration is a key element of care integration, and the aim of care integration is to deliver coordinated and patient-centred care.¹⁰

This study investigates multi-disciplinary collaboration in four PCCs and identifies antecedents of successful collaboration in those PCCs. This study makes an important contribution to the literature on the theory of care integration⁶ by offering a deeper understanding of the social dimension of care integration, with a specific focus on the professional component of interpersonal integration. By investigating multi-disciplinary collaboration in teams that have diverse expertise at

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both local and territorial levels, this study answers the call made by Deken et al. to investigate the connections between intra- and inter-team practices.¹¹ In identifying the antecedents of collaboration in multi-disciplinary teams,¹² this study provides a new understanding of the mechanics of emerging collaborations, thus highlighting new aspects of professional collaboration among healthcare workers.¹³

Background

From co-location to care integration via collaboration

In rural settings, co-location of primary healthcare professionals and provision of integrated care depend on effective collaboration, and effective collaboration requires that professionals who have a diverse range of roles take shared responsibility within multi-disciplinary teams.⁷ Physical co-location¹⁴ is a necessary, but not sufficient, condition for collaboration.² Although physical co-location often enables both professional (e.g., between GPs and nurses) and organisational (e.g., face-to-face meetings)² integration, it can be hindered by persistent organisational boundaries and a reluctance to share information (silo mentality).¹⁴

Care integration is a multi-dimensional construct¹⁵ that combines care coordination and patient-centredness to enable care continuity.⁷ Singer et al.,⁶ who followed the extant literature by emphasising the importance of collaboration, developed a theory of care integration in which they explain types of integration and their relationships to each other according to social and organisational features. They propose a new parameter, 'interpersonal integration', which refers to collaboration among healthcare professionals, non-professional caregivers and patients. Interpersonal integration includes the more specific area of 'professional integration', which concerns collaboration among professionals of one or more disciplines. Finally, care integration is enhanced when team members collaborate effectively and is undermined when they collaborate ineffectively.^{5,6,16}

French multi-professional health homes

In France, as in Belgium and Germany, single-handed GP practices that operate under an insurance-based healthcare system have been widespread since the end of World War II¹⁷; rural areas have suffered increasing shortages in primary care services under this system. In line with other Western countries, France began to implement PCCs as team-based practices in 2007 to address the growing demand for healthcare in rural areas⁵ by financially incentivising private single-handed healthcare practitioners to integrate their single-handed practices into multi-disciplinary co-located primary care practices. This

resulted in the creation of French multi-professional health homes (MHHs), which are PCCs that can be described as 'an organization [...] that gathers several primary healthcare professionals around a formalized project and operational objectives regarding patient care'.¹⁸ Although MHH practitioners receive financial incentives via public funding for coordination, they maintain private self-employed status and autonomy receive financial incentives via public funding for coordination.¹⁹ A recent study suggested that practitioner ethos in MHHs catalyses collaboration.²⁰ Another study of over 1000 MHHs reported that they were distributed roughly evenly between urban and rural areas and that only 14% of them had set up actions to initiate inter-professional collaboration; this poor level of collaboration undermines the wide implementation of a multi-disciplinary approach.²¹ This study investigates the drivers of successful collaboration in the MHH setting, where MHHs are a specific type of co-location-based PCCs.

Methodology

Data and analysis

This qualitative study utilised open-ended interviews and observations of healthcare practitioner practice to investigate successful collaborations. The study topic was inspired from the proceedings of the Annual National Congress of the French Federation of MHHs; this congress is attended by many self-employed private primary care practitioners who work in MHHs. The study researcher, who attended the 2017 National Congress of the French Federation of MHH, met different healthcare professionals looking for potential study participants. She was invited to observe the practices of practitioners working at four MHHs^a located within a 20 km radius of each other. Members of these four MHHs become the study group from which the researcher identified and investigated the drivers of successful collaboration. In addition to local collaboration, practitioners from the four MHHs set up actions together and collaborate on a territorial level.

The researcher interviewed 42 healthcare practitioners and 3 administrative assistants (table 1), who all gave informed consent. Participants were interviewed in open-format interviews that took place over a two-week period in April 2017; interviews covered career path, integration of their practices in MHH, engagement in MHH projects, interactions with other practitioners and participant feelings, thoughts and practices in this new environment (MHH). Five participants were each interviewed twice. In addition to interviews, data were gathered from observation sessions. The researcher was formally in the field for 142 h, in addition to seven informal dinners and eight informal breakfasts. Finally, the study researcher gathered additional

Table 1. Participant details, by MHH.

	MHH 1	MHH 2	MHH 3	MHH 4
Administrative assistants	0	0	1	2
Dentists	1	1	0	0
GPs	3 + 1 intern	4 + 2 locums + 1 intern	3 + 1 locum	4
Midwives	1	0	0	2
Nurses	2	0	1	2
Osteopaths	0	0	0	1
Physiotherapists	0	0	4	0
Podiatrists	0	1	0	0
Psychologists	0	1	0	1
Speech therapists	2	0	0	3

GP: general practitioner; MHH: multi-professional health home.

data through her own participation at a patient therapeutic education (PTE) project kick-off meeting between the four MHHs. Hence, the study²² investigated two levels of collaboration: local and territorial. Three follow-up interviews were conducted by telephone one year later (table1).

A total of 50 French language interviews were conducted, recorded and transcribed prior to conventional content analysis.²³ Interview transcriptions were searched for 'collaboration'-related comments that generated the following categories: case curation, health promotion, knowledge sharing, support, comfort, efficiency, competence transfer, territorial contagion, prior experience in a joint-GP practice, professional impetus and GP peer group membership. Relevant comments were recorded verbatim in a study database, ready for analysis; example statements that best illustrate each category were translated and are included in the Results section. This methodology yielded study results without imposing preconceived categories.

Case description

The four MHHs, all of which were situated in closely located rural villages of Southwest France, were each made up of between 14 and 24 private practitioners who covered a diverse range of specialities (between four and seven different specialities). GPs, who worked alongside the various allied professionals, formed the core speciality in each MHH. Each MHH was characterised by having a shared workplace (i.e., co-location) and having health projects that had common operational objectives (i.e., collaboration) to offer care continuity to patients.

In response to territorial needs, 15 participants (GPs, nurses, physical therapists, a podiatrist and a nutritionist) had collaborated to develop a PTE project for patients with complex cases (i.e., chronic, multiple pathologies). Three other private, single-handed practitioners joined the PTE project.

The PTE concept originally operated in the hospital setting. However, 10 years ago, a rural GP peer group^b

identified that hospital PTE provision was ill-adapted to patients and that it might be better provided outside of the hospital setting. The resources and skills of this GP group, who were working either single-handedly or in joint mono-disciplinary practices, were initially inadequate to set up such a project. However, the same GPs were able to bring the project back to the table for discussion after the establishment of the four MHHs in 2015, when four of the GPs successfully convinced their respective MHH co-workers to implement the PTE project.

Results

This study investigates the collaborative dynamics that result from co-locating private practitioners in MHHs at local and territorial levels in rural France. The local level relies on multi-disciplinary collaboration among practitioners working within the same MHH, while the territorial level involves collaboration among practitioners from four MHHs. The results are presented according to each level of multi-disciplinary collaboration, detailing the benefits (Table 2) and perspectives offered at each level, as summarised in Figure 1. The results shown in Figure 2 illustrate how the PTE project moved collaboration from being mono- to multi-disciplinary and from local to territorial. The results provide evidence of benefits for practitioners due to the superior integration of MHHs compared to single-handed practices, as illustrated in Table 2. The results also reveal three antecedents of multi-disciplinary collaboration (see Figure 3 and Table 3): prior experience in a joint-GP practice, professional impetus and GP peer group membership.

Local multi-disciplinary collaboration

Local collaborative practices in the four MHHs are team-based. Although such team-based approaches improve knowledge sharing,⁵ observed behaviours of knowledge sharing and team learning (i.e., ways by

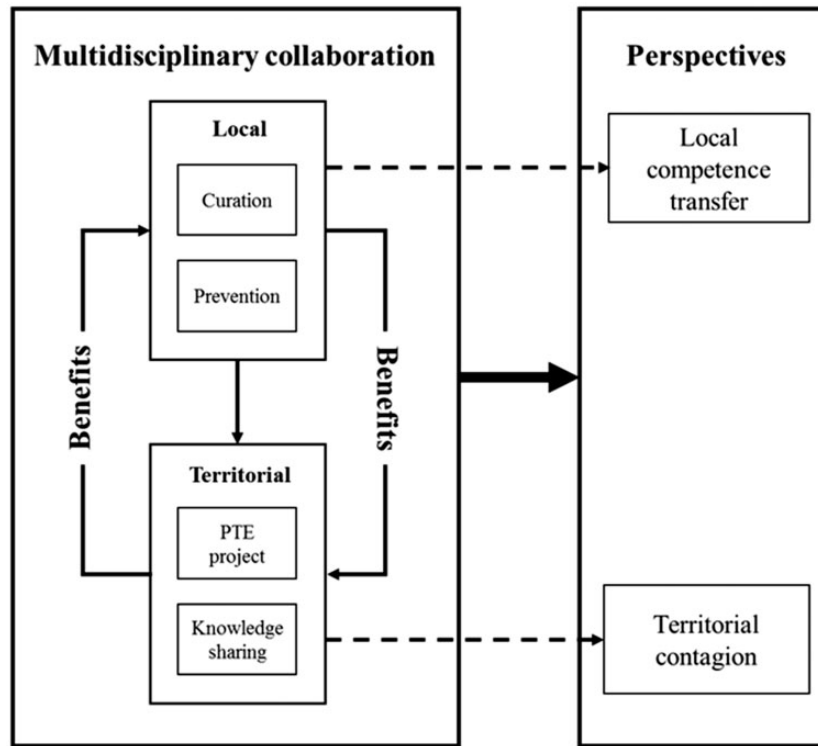


Figure 1. Flow diagram of multi-disciplinary collaboration in French MHHs.

which team members acquire knowledge through interactions)⁸ tend to be heterogeneous. For example, the causes, regularity, frequency, length, content and participants of team meetings varied across the four MHHs. Participants reported that they experiment continuously with different tools and ideas in order to search for the best collaborative model; this is to be expected since healthcare practitioners are not usually trained specifically to collaborate.²⁴ Although a lack of training can act as a barrier to collaboration, engaging in experimentation can be a driver of collaboration, as GP1 explained:

As I told you about design, once you taste it, you want it to continue, to get stronger. So now, our long-lasting research has made us what we are: a stable structure.

From this statement, we can conclude that the success of the four MHHs relies on experimentation. Their engagement extends beyond direct healthcare to include health promotion and disease prevention.

Case curation. Participants reported that they share common patient cases with other practitioners within their MHH using a variety of communication methods; they invite others to discuss complex cases and occasionally hold mono- or multi-disciplinary joint appointments, as described by GP2:

The physiotherapist's view is so interesting to me that I go and ask them what they think or even ask them to join and evaluate the situation if they can help in a given medical case.

Health promotion and disease prevention. Participants described how each MHH implements actions for health promotion and disease prevention. These actions range from producing health promotion materials (e.g., audiovisual materials or brochures) to organising events and workshops that engage other local stakeholders such as pharmacists; this was illustrated by Nurse 1:

For the occasion of one-month without smoking, we organised two workshops at school and anti-smoking campaign here as a public event to which we invited other professionals such as pharmacists. We have a GP specialist in anti-smoking issues who lead the debate.

Territorial multi-disciplinary collaboration

The GP peer group and successful multi-disciplinary collocation in the MHHs allowed practitioners to engage in projects and increase the level of both territorial collaboration and collective entrepreneurship, as noted by one of the nurses (Nurse 1):

It [MHH co-location] allowed us to strengthen our collaborative work and to undertake projects that we wouldn't have been able to undertake alone in a single-handed practice.

PTE project. In rural areas, small patient populations present a challenge in terms of realising healthcare projects⁴ such as PTE projects. Inter-organisational collaboration is, thus, necessary to achieve a critical mass of resources.²⁵⁻²⁹ One GP described the territorial multi-disciplinary collaboration between the four MHHs (GP3):

This project can't be held by one health home for two reasons: human resources and patients. Our collaboration allows for pooling resources and patients.

The PTE project, whose development is summarised in Figure 2, transforms ideas from the mono- to multi-disciplinary level, while at the same time mobilises resources from the local to territorial level. In so doing, the PTE project empowers care integration,^{7,10} avoiding critical mistakes through effective inter-team collaboration.³⁰

The PTE project idea first emerged 10 years ago through GP peer group discussions about a complex patient case; these discussions were resumed by GP peers seven years later, following the establishment of the MHHs (Figure 2(a)). It was at this point that four of the GPs communicated the project idea to their collaborators. The PTE project is made up of small teams of 3 to 5 caregivers in each MHH (Figure 2(b)), giving an overall project team of 15 MHH practitioners and 3 local private, single-handed practitioners (Figure 2(c)).

This multi-disciplinary PTE team shared ideas⁸ and developed a project proposal that won regional public funding, thus enabling a 40-h training programme for PTE trainers and administrative coordinators, and patient workshops on therapeutic education. The project concept, which was tested and evaluated in a one-day event in April 2017 (Figure 2(d)), empowers patients who have chronic and complex diseases by providing adapted therapeutic education. The PTE project addresses patient needs by providing interactive workshops on therapeutic education; workshops are run by two healthcare practitioners. Patient enrolment starts with patient orientation by one of the GPs within the project territory. Patients are then contacted by the administrative coordinator who arranges a PTE project appointment between the patient and the GP to determine the required protocol. GP4 summarised the process:

Patients can be recruited by any [GP], though some practitioners [do this] more than others. Many [GPs] who were not even working in any of the health homes directed patients to PTE, and they contacted our coordinator and were enrolled in the programme.

After serving 50 patients through 10 PTE workshops during its first year of operation, the PTE project was assessed in June 2018 during a project assessment workshop that was attended by eight practitioners and eight patients; the project is subject to ongoing regular assessments.

Knowledge sharing. In addition to the GP peer group, knowledge is shared between the MHHs in other ways,

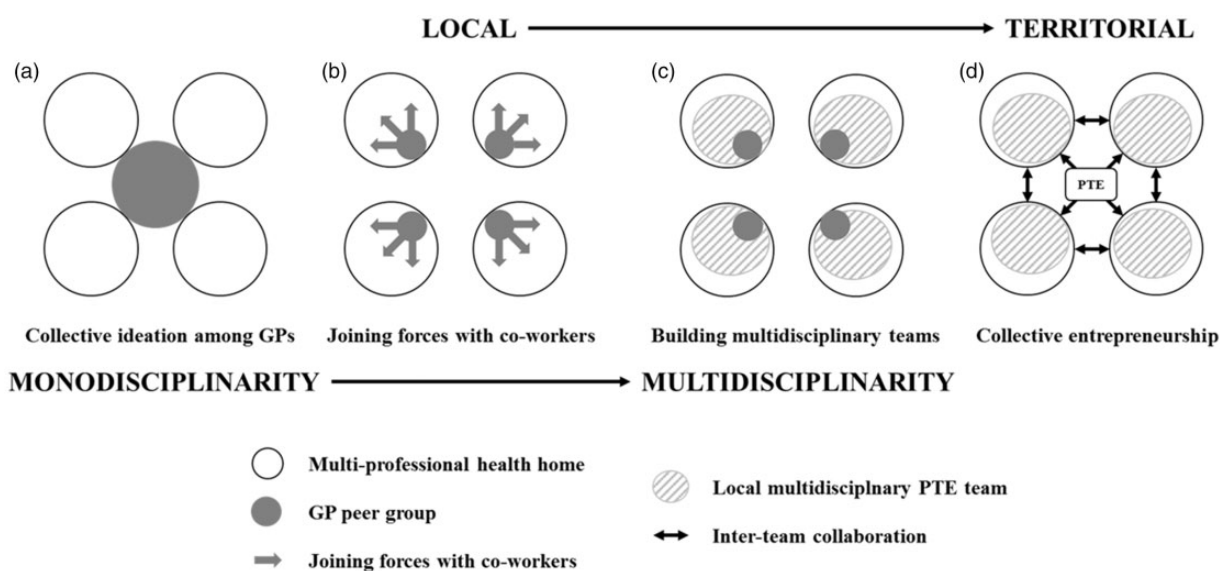


Figure 2. PTE project development. GP: general practitioner; PTE: patient therapeutic education.

depending on the context; for example, meetings are held to improve mentoring of medical students, resources are shared and local health projects are discussed. One GP participant from MHH 4 described knowledge sharing (GP5):

Though we were interested in smoking prevention activities, we didn't have the opportunity to create the needed tools. In [MHH 1], many events and workshops had already been held. They offered us their PowerPoint presentations, so we only had to do minor changes, and we organised some events in our locality.

Benefits of multi-disciplinary collaboration

Co-location in rural areas is highly beneficial in the context of effective practitioner collaboration. Table 2 summarises reported benefits to practitioners of multi-disciplinary collaboration in co-location settings. Practitioners report that co-location results in improved work conditions, hence making the work environment more attractive to both qualified and student practitioners. Likewise, practitioner co-location improves patient access to healthcare, both in geographical and temporal terms. Improvement to patient access was described by a midwife participant:

For patients, it's utterly beneficial, especially in the countryside [...]. Here, they have access to their GPs, dentists, the pharmacy [...], and GPs are available for urgent cases, with the health home open early in the morning and late in the evening.

One GP participant explained how multi-disciplinary collaboration reassures patients and improves both quality and continuity of care (GP1):

Interactions improve quality of care, and patients like that they know the nurses or any other GP who may do home visits [...]. They feel that we genuinely communicate; they feel it and appreciate it.

Perspectives in collaboration

Collective team identification (i.e., sense of team belonging) often requires a long-term shared history between team members⁸ to ensure that perspectives such as local competence transfer and territorial contagion are achieved.

Local competence transfer. GP8 described how multi-disciplinary collaboration allows practitioners to share knowledge, break down barriers and reinforce trust.

As this paradigm develops over time, collaboration and knowledge sharing strengthen, as described by GP8.

[An MHH] should allow, little by little, new working-together models, in which we will move from sharing to transferring competencies. For example, a [GP] would care about diagnosis and treatment while other caregivers, such as nurses, would be in charge of patient education and follow up.

Territorial contagion. One of the PTE-coordinator GPs (GP4) described his engagement into a new GP peer group created by one of his GP colleagues in September 2017:

I left the peer group that you know and joined a new one with two colleagues and other [GPs] from other surrounding villages. Some of them have just created their health home, and others are still in a single-handed practice. [...] One of my colleagues wanted to join a [particular] peer group, but due to a size restriction – otherwise, it wouldn't work – she couldn't join that one. So, she started writing to [GPs] from other villages, and we constituted a new one. [...] I talked to them about the PTE project, but I don't think they are ready at this moment. But who knows, they may join the project over time or, at least, participate in recruiting patients.

This GP, who has strong local and territorial collaborative experience, might inspire other GPs to help extend the limits of territorial multi-disciplinary collaboration.

Antecedents of multi-disciplinary collaboration

When seeking to match practitioner narratives to practices, two antecedents emerged as being crucial to establishing a collaborative local PCC: (i) prior experience of being a GP in a joint practice and (ii) professional impetus. At the territorial level, collaboration relied on collaborative PCC along with the GP peer group as the centre of knowledge sharing. Antecedents of multi-disciplinary collaboration are illustrated in Figure 3, with accompanying detailed evidence (through verbatim quotes) provided in Table 3.

Discussion

Compared to single-handed practices, MHHs, as co-location-based PCCs, offer added value to patients by facilitating access to different healthcare practitioners. In addition to improved physical access, temporal access is sometimes also improved through having extended opening hours, perhaps up to 12 h a day. Through collaboration between healthcare practitioners,

Table 2. Benefits to practitioners of multi-disciplinary collaboration in co-location settings.

Dimension	Benefit	Verbatim
Support	Technical support	<i>The possibility to call on somebody to help me address an issue. (GP4)</i> <i>Taking advice when in trouble for a diagnostic or a treatment protocol. (GP2)</i> <i>All this [technical support] comforts me so that I don't feel isolated, like an electron in the middle of nowhere. (GP6)</i> <i>A colleague of ours in another cabinet who holds a certificate in cicatrization can help us when needed. (Nurse 1)</i> <i>I hope that I taught them something about my practice. (Podiatrist)</i>
	Social support	<i>What I missed the most in private practice was the absence of sharing. (Speech therapist 1)</i> <i>I can't stay alone'. (GP7)</i>
Comfort	Self-improvement	<i>We can always pick something up from one person or another. (MW)</i> <i>By both self-re-assessment and the discovery of others' skills. (GP8)</i> <i>The intellectual stimulation that we get, I think, is super important. (GP4)</i>
	Inter-professional trust	<i>There are things that they [other caregivers] would accomplish much better than me. (GP9)</i> <i>For physiotherapists, I like to have their opinion. (GP2)</i>
Efficiency	Quality of work	<i>Job quality and work enjoyment are completely different. (GP8)</i>
	Easier communication	<i>It allowed me to know... to put faces on GPs' names [...] so that it's easier to call them. (Nurse 2)</i> <i>We tend to pass by each other more often. (GP2)</i>
	Time management	<i>We spend less time on the road [i.e., patient access/home visits]. (Nurse 3)</i>
	Sharing resources	<i>We share the same software. (GP8)</i> <i>We share resources, but also, we share objectives. (GP3)</i> <i>Each of us contributes to her salary [about the administrative support]. (GP1)</i>

GP: general practitioner; MW: midwife.

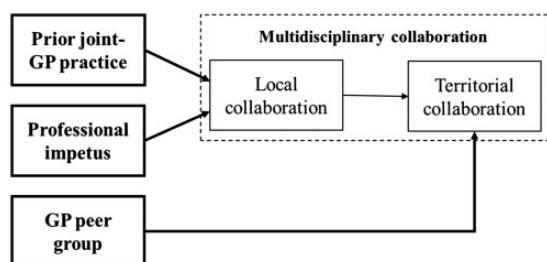


Figure 3. Antecedents of multi-disciplinary collaboration. GP: general practitioner.

PCCs offer an integrated care approach to complex cases that require continued care of the highest quality. The current mixed evidence regarding the effectiveness of co-location strategies⁹ is further weakened by the lack of empirical studies on successful team-based practices in healthcare⁵; investigation into practices of multi-disciplinary healthcare practitioners is critical to improve the understanding of care integration.⁶ This study has extended the current understanding of care integration⁶ by identifying antecedents of multi-disciplinary collaboration.

Contributions to the field

Prior joint-GP practice experience. In agreement with Lega et al.,²⁴ this study found that GP leadership is key to convincing other primary care practitioners to form

multi-disciplinary teams. Having prior experience of training or working in a joint practice increased the likelihood that a GP would engage in the future multi-disciplinary collaborations. In the four studied PCCs, the GPs with prior collaborative experience shared their vision and encouraged the other practitioners to collaborate. All team members built a culture of multi-disciplinary collaboration.

Professional impetus. The four PCCs in this study were founded out of the single-handed practices of some of the current PCC practitioner members; three were funded privately by the practitioners themselves, while the fourth was funded by the European Union. In all cases, the PCCs were founded under the impetus of the practitioners rather than from any kind of centralised authority. The overall process of founding each PCC took between two and six years, depending on how they were funded, with self-funded PCCs being the fastest to become operational. The willingness of a GP to engage in this kind of high-risk entrepreneurial action demonstrates a high level of commitment to multi-disciplinary and collaborative co-working. The resultant PCCs are highly entrepreneurial organisations that are made up of a coherent team of emotionally engaged practitioners working in stimulating environments; these PCCs are able to push beyond conventional boundaries in healthcare practice by initiating projects such as those aimed at health promotion. The fact that

Table 3. Verbatim quotes to support antecedents of multi-disciplinary collaboration.

Local collaboration		Territorial collaboration
Prior experience in a joint-GP practice	Professional impetus	GP peer group membership
<p>For us, [GPs], we have been working in this village for seventeen years. There were two of us at the beginning, and we decided to work together to share the workload of a retired [GP]. At that moment, we decided to work together, considering patients as patients of the practice. They would consult any of us. We shared everything and shared information. By then, whenever a new [GP] would have liked to join us, it meant engaging in our collaborative mode. Health homes were an occasion to enlarge our collaborative mode with other [GPs] and other caregivers. (GP8)</p>	<p>What's really interesting in our project and what I am passionate about is creating things: creating the project, the charter, the internal regulations, thinking about our values and. . . it's so exciting! Staying together and saying, 'we are a group, and we create our own work environment with every single detail'. We imagined what it should look like, how it should be working, what we accept and what we don't. . . and we extended our freedom of speech and expression! (GP1)</p>	<p>I met [GPs] in the three health homes thanks to the peer group, in which I used to participate [. . .] with historical members. It was already a group of practice sharing, bringing together [GPs] from the other three pools before the creation of any health homes. It aimed to get free from the pharmaceutical industry, hospitals or specialists, to hold our own meetings as [GPs], to brainstorm together and to draw our own conclusions. So, it was a working group of knowledge and experience sharing. So, for a long time, it was about sharing, while now it has stepped into a PTE project. Though I quit the group, lacking time, I keep meeting some of these [GPs], where we discuss medical student mentoring. (GP6)</p>
<p>In the beginning, it seemed to be poetry for me, this collaborative project that was unusual in France. They had their Belgian model of medical homes, while I was used to single-handed private practice, as was common in France. With the first patient case that was oriented by a nurse, we discussed the case all together. (SP2)</p>	<p>Teamwork dynamics come from the willpower of practitioners to work together. It can't come from territorial or national policies or any financial incentives. Nothing else than real willpower would be enough to build up a real, team-based health home. (GP6)</p>	<p>What revived the PTE project, three years ago, was that each health home was internally structured and stabilised. Besides, the Regional Health Agency gave priorities on health promotion according to national policy. (GP3)</p>

GP: general practitioner; PTE: patient therapeutic education; SP: speech therapist.

these PCCs were formed under professional impetus seems to be a major driving force in their multi-disciplinary and collaborative nature.

GP peer group membership. The inherently small patient populations found in rural areas present unique challenges (e.g., funding, physical access, breadth of specialism on offer) to rural healthcare projects.⁴ Inter-organisational collaboration is a key means of facilitating the provision of sufficient complementary resources.^{25–29} Territorial dialogue can be enhanced by local practitioner networks, such as those in GP peer group practices. Furthermore, coaching by peers facilitates knowledge sharing and professional development. Since 2002, Prior to the creation of the PCCs, GP peers meet monthly to discuss complex cases they encounter each month as well as new local or national directives. It was in these group discussions that ideas of PCC formation as well as PTE project emerged and were pursued. GP Peer group active membership bridged collaborative PCCs and allowed territorial collaboration.

Limitations, managerial implications and future research

Limitations. This study, which adopted a case study approach,²² yielded a rich database of information that can be used in the theory development. However, in order to generalise the theory, further studies are needed to both repeat and extend the scope of research in other contexts. Two antecedents of local collaboration (i.e., prior experience of joint practice and professional impetus) were observed in four different PCCs; replication among four PCCs suggests that it may be possible to transfer these results to a wider context. On the territorial level, this study focussed on GP peer group membership bridging local collaborative PCCs; further work investigating peer group dynamics in other contexts is needed to test transferability of the study results to other contexts.

Managerial implications. Although organisation leaders can influence interpersonal integration by promoting co-location strategies,⁶ they cannot control it directly. Evidence of what is the optimum co-location strategy,

while mixed, suggests that simply encouraging practitioners to join co-location-based practices is insufficient to properly promote interpersonal integration. A full and deep understanding of the antecedents of successful local and territorial collaboration would better inform both practitioners and policymakers about what best drives collaboration. Indeed, integrating collaborative teamwork into medical courses would likely prepare future practitioners for effective collaboration in their professional lives, thus breaking down organisational boundaries between GPs and other healthcare practitioners. This would, in turn, facilitate early collaboration to build successful multi-disciplinary projects in the future. Early practitioner engagement creates a sense of self-investment in PCC-type projects. Finally, policymakers should encourage peer group collaborations across different healthcare areas as means of promoting territorial dialogue.

Future research. Although healthcare practitioner ethos is believed to be key in catalysing collaboration,²⁰ the lack of collaborative components in practitioner training (e.g., among GPs)²⁴ makes collaboration difficult to achieve. Further research is needed to extend the understanding of multi-disciplinary collaboration in order to answer the following key questions: (i) What are the most effective collaborative tools? (ii) What knowledge and skills should be shared? (iii) Who should specific practitioners collaborate with to get advice? and (iv) To what extent do practitioners have shared responsibilities? Finally, drivers and barriers to collaboration in co-location settings should be identified by investigating the dynamics between the social (i.e., healthcare practitioners, patients) and the material (i.e., physical space, technology) in day-to-day practice. Peer group dynamics should also be further investigated. As asserted by Bonciani et al.,⁹ these difficult-to-understand issues make practitioners who have received little or no training in how to collaborate effectively reluctant to engage in mono- and multi-disciplinary collaboration in co-location settings.

Conclusion

This study contributes to the literature on multi-disciplinary collaboration¹² by identifying three antecedents to multi-disciplinary collaboration: prior joint-practice experience, professional impetus and GP peer group membership. These antecedents, in turn, lead to care integration.¹⁰ This study shows that GPs with mono-disciplinary collaborative backgrounds can encourage other practitioners to collaborate by demonstrating openness and offering practical examples of the abstract dimension of care integration. Furthermore, this study highlights the importance of practitioner

involvement in PCC creation. Finally, successful co-located multi-disciplinary PCCs, along with their GP peer groups, offer a valuable opportunity to advance to territorial collaboration and collective entrepreneurship.

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Notes

- One of the four MHHs receives no public funding and does not, therefore, need to establish a formal health-related project. Inclusion of this MHH in this study is justified due to the MHH's local multi-disciplinary collaborative dynamics and its implications in the territorial PTE project.
- A GP peer group is a registered tool that was created by the French Society of General Practice in 1994. The French Society of General Practice aims to promote continuous learning and evaluation between GPs in a limited geographic zone. Composed of 6 to 10 GP volunteers, this professional group (GP Peer group) meets monthly in order to share information and experience on complex cases reported from the day-to-day practice of its GP members.

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