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RESEARCH ARTICLE

Addressing inequalities in access to healthcare in France: combined perspectives of management and health geography

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Territorial inequalities in access to care and the lack of health practitioners represent one of the important challenges health systems are facing worldwide. Territorial management seems to be the discipline to address these concerns in a holistic and interdisciplinary way, specifically via the concept of lived territory. Territorial management and health geography share the same vision on the definition of the lived territory, namely a territory which is a social construction, dynamic and shaped by its users. However, territorial management lacks tools to define the lived territory, whereas the 'relative flows' method in health geography identifies users' real healthcare consumption on the territory, offering an operational tool for stakeholders, including healthcare professionals and local decision makers. Focusing on the intersection of management and health geography, this study is looking to address the question: to what extent would the inter- and transdisciplinary approach enable an effective response to the difficulties of access to care in the territory?

This research is based on a case study of the French region Centre-Val de Loire. The findings of the study emphasise an added value of the inter- and transdisciplinary approach in operationalisation of territorial management discipline. The lived territory concept appears a most appropriate grid in the evaluation of inequalities in access to care and thus an effective tool to mobilise the involvement of healthcare stakeholders in a new territorial organisation centred on user needs in care.

Keywords territorial management • lived territory • physician shortage • healthcare inequalities • territorial organisation

Key messages

- Interdisciplinary and transdisciplinary approach via the lived territory concept allows operationalisation of territorial management discipline in addressing healthcare inequalities.
- The territorial grid remains the main difficulty in a territorial diagnosis of inequalities in access to healthcare.
- The lived territory appears a most appropriate grid in evaluation of inequalities in access to care and effective tool to mobilise the involvement of healthcare stakeholders.

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Introduction

The COVID-19 pandemic has put health systems under severe strain (Frawley et al, 2021; Okereke et al, 2021; Mustafa et al, 2022). The French health system was no exception. However, the COVID-19 crisis has diverted attention from quite old issues, such as inequalities in access to care and the lack of general practitioners and specialists within French territory. These issues have re-emerged with a new force and highlighted the tensions between public policy makers, healthcare professionals and civil society. Indeed, the lack of medical doctors in France represents a result of the multi-year policy of healthcare offer control set up by public policy makers in order to limit and rationalise the number of doctors on French territory through the 'numerus clausus' system (abolished by the Law No. 2019-774 of 24 July 2019 on the organisation and transformation of the health system and replaced by 'numerus apertus' system). This tension has taken on such a dimension that the well-known consumer association in France, UFC-Que Choisir, lodged an appeal in November 2023 to the Council of State against the government's inaction regarding the widespread inequalities of access to care, often called the 'medical desert'. In response, at the end of January 2024 the French government announced a set of measures seeking to address the lack of doctors on French territory, including in particular the appointment of an emissary who will 'seek doctors abroad who would like to come and practise in France' (Battaglia and Stromboni, 2024). This announcement caused strong reactions among healthcare professionals and civil society not only about the legitimacy of the medical diplomas, but also ethical concerns about retrieving healthcare professionals from territories whose population would risk lacking doctors.

In this tense context, several disciplines hastened to contribute their reflection on the analysis of inequalities in access to care, though without providing a holistic vision in case of a multidisciplinary problem. At the same time, the discipline of territorial management or territory management seems to have the appropriate tools to respond to such a problem of physician shortage on the national territory and by its name inspires at least a multidisciplinary approach. Although reflection on territorial management was initiated in the French-speaking area in the 1990s by geographers, its appearance in the field of management is quite recent and

periodic. Indeed Ruegg (1997: 146), as a geographer justifies the use of the word *management* as 'an essential source of inspiration for evaluating the role of the public service and for initiating its restructuring' and considers 'territorial management' as a 'management of all human relations contributing to the production of territories or 'environments'. Nadou et al (2020) underline the rebirth of the interest brought by management sciences and political sciences to the territory which is now considered as a stakeholder in its own right, namely 'the alpha and omega of all theory and all policy' (Nadou et al, 2020: 581) and raise a question as to the place of territorial management in relation to the territorial planning concept. Although the term 'territory' is polysemous and used by several disciplines as the object and subject of study, the crossing of the perspectives of human geography and management seems particularly appropriate in terms of understanding and managing inequalities of access to care in the territory. However, the crossing of the perspectives of managers and geographers in terms of territorial management seems rare. Thus, the interest of such a holistic approach seems important not only from an empirical point of view, but also from an academic point of view, in order to avoid the phenomenon of reinventing the wheel – questioning the same issues in research without recognising that the solutions already exist in other literature (Vienni-Baptista et al, 2022).

Indeed, the academic literature in territorial management and health geography emphasises that the territory definition needs to consider the real needs and consumption habits of users in responding to inequalities in access to care, which they call the 'lived territory'. Territorial management and health geography share the same vision on the definition of the lived territory and the same semantic field, namely a territory that presents itself as a social construction, dynamic and defined by its stakeholders. However, the application of the 'relative flows' method used in health geography (Macé, 2002; 2010) allows the identification of the scope of users' real spatial practices and thus offers an operational tool for reflection for territorial stakeholders, notably healthcare professionals (general practitioners) in the definition of the territorial health project.

Indeed, the territorial grid remains the main difficulty in a territorial diagnosis. As the lived territory reflects the real spatial practice of users (spatial behaviour regarding healthcare services consumption), it brings relevance to the indicators used to measure the local healthcare offer. So, as a territorial grid, the lived territory allows a more rigorous assessment of the impact of the local healthcare offer on users unlike other broader spatial grids such as a living area (defined as the smallest territory with access to the most common facilities and services, such as schools, supermarkets, bank branches, swimming pools, health service and so on), a department or a region where the healthcare indicators (including physician density, medical desert and healthcare consumption) are hidden by the effect of the average. Indeed, previous studies (Kananovich and Macé, 2023) emphasised that the use of a broader geographical grid in the territorial diagnosis greatly minimises the healthcare service availability ratio. Thus, the application of the 'living area' grid in territorial diagnosis identifies 404 territories and 6.5 million inhabitants concerned by insufficient access to primary healthcare, namely the lack of presence of general practitioners on the territory of metropolitan France. The lived territory approach identifies 11.7 million inhabitants living in 2,067 lived territories concerned by the lack of access to general practitioners' care, which represents almost the double of users concerned by the difficulties of access to healthcare.

However, the physician shortage represents one of the major social challenges of healthcare systems worldwide and it is therefore hoped that the territorial diagnosis based on the lived territory approach might be transposed to other countries. For example, in Germany the health professionals work in private practice, like in France, and under the health insurance approval which allows them to treat any person covered by the compulsory health insurance. In this organisation, it becomes possible to access to the country's databases and evaluate patients' flows regarding healthcare consumption at the national and/or local level. Furthermore, the lived territory approach can be transposed to other healthcare problematics and specialities, as well as to hospital care consumption (Berger et al, 2013; Kananovich and Macé, 2022).

The present study is part of both interdisciplinary research in the sense of Barry et al (2008: 27) 'in which there is an attempt to integrate or synthesise perspectives from several disciplines' and transdisciplinary research as 'an approach oriented to complexity or real-world problem-solving, or one aimed at overcoming the distance between specialised and lay knowledge or between research and policy or "decision-making" in society' (Lawrence and Després, 2004: 399). Thus, the present study is interested in the intersection of management and health geography disciplines as a potential source of identification of tools for territorial management in health, as well as providing solutions to territorial stakeholders, in particular policy makers, elected representatives and medical doctors, regarding the effective organisation in response to difficulties in accessing care in the territory. The present study is looking to address the question: to what extent would the inter- and transdisciplinary approach enable an effective response to the difficulties of access to care in the territory?

Indeed, in terms of health planning, the use of the lived territory concept allows not only identifying users' real care needs, but also mobilising territory stakeholders such as elected representatives, doctors and government health agencies around the search for a collective and effective response to the difficulties of access to care in the territory, namely the implementation of the prevention policy adapted to the territory, effective management of medical doctors' retirements and identification of needs for medical resources. Furthermore, the combined view of management disciplines and geography highlights the need for integration of the patient in any reflection on the organisation of access to care and respect for the very principle of health democracy in the territory in question at any scale. The present study is based on a case study of management of access to general practitioners' care by lived territory concept within a medically fragile territory, identified as a medical desert (wicked problems) in the Centre-Val de Loire region in France.

Territorial management: epistemological questioning

From a semantic point of view, territorial management gathers the terms of management in relation to the management science on the one hand, and of the adjective territorial as deriving from the noun 'territory' (Ruegg, 1997), on the other. Although geographers seem to be the first to ask the question about the interest of management concepts and tools as a support for territorial planning and for public authorities (Decoutère et al, 1996), the definition of territorial management has been picked up by management sciences. However, its place within management sciences remains unstable. For example, Chatelain-Ponroy et al (2021) consider a territorial management as a shifting subtype of general or public management applied to a

researcher's specific substantial area of study (along with healthcare management, art management and so on). Hernandez (2006: 56) focuses on the strategic dimension of territorial management and identifies it as 'a specific form of strategic management applying to territorial public organizations'. Casteigts (2003: 13) emphasises that territorial management 'does not only concern the action of local authorities or regional planning but constitutes a renewed way of implementing all public policies in a coherent project'. In this sense, Hernandez (2006: 58) underlines the action-oriented positioning of territorial management which requires, in fact, a proposal of the pragmatic and operational concept to the managers of territorial organisations in order to act on the territory. The author also describes territorial management as being 'integrative by nature', 'heuristic', 'incremental', 'deeply operational', but which is not limited to a linear process of planning, execution and evaluation. Arnaud and Soldo (2015: 116) emphasise that territorial management can be defined as an alternative to classic top-down approaches, as well as 'a new paradigm of local public action' and 'is part of the search for new modes of territorial organization and management'. The authors also highlight a project dimension of territorial management considering that 'territorial management increasingly takes the form of project management' (Anaud and Soldo, 2015: 116) in the context of the complexity of territorial strategic projects.

On the side of geographers, interest in territorial management may be associated with the field of planning. Friedmann broadly defined planning as the 'the application of knowledge to action' (Sanyal, 2018), which represents one of the key characteristics of territorial management adopted by the management science then. However, the works of Friedmann played a critical role in highlighting the participative side of planning, shifting the focus from the exclusive government role in planning to civil society participation, as well as to the notion of social justice in planning (Friedmann, 1987). Friedmann's vision joins a phenomenological approach to geographic space analysis in progress at that moment in West European context. In fact, Friedmann highlights the difference in the understanding of spatial framework of planning between American and Western European standpoints; the latter consider the region as a 'territory' (Friedmann and Weaver, 1979). European authors, such as Hägerstrand (1975) consider a territory as a space-time prism made by social flows and based on the notions of personification and emotion. The French planning context has been particularly influenced by the works of Armand Frémont published in the 1970s and his capital book *Region as a Lived Space* (1976) which led to the development of 'lived territory' concept. The 'lived territory' is described as a space lived or experienced by individuals in society and resulting from their daily repetitive spatial practices, such as commuting to work. The Frémont vision of space both marked an important shift in the community of French geographers and sent an equally important signal to territorial managers regarding the consideration of geography knowledge in the public policy making. Indeed Frémont (1976: 10) writes, 'Driven by current events or the requirements specific to each activity … planners, administrators … multiply interventions in the region or in space, and do geography without realizing it or do it anyway'. However, it was not until 1995 that the term *territorial management* was presented and questioned during the Community of Studies for Territorial Planning in Switzerland.

Finally, the term 'territorial management' presents itself to geographers as rich in meaning and integrating into the concept of territory and the territoriality particularly developed by geographers Frémont (1980), Raffestin (1980) and Sack (1986). Thus,

territorial management is presented as 'the set of human interrelations contributing to the production of territories or "environments"' (Ruegg, 1997: 146) which aims 'the production of autonomous territory and a creator of shared meaning' (Decoutère et al, 1996). Although Decoutère et al (1996: 30) consider territorial management as a multidisciplinary concept that is a part of both the 'environmental, social, economic, temporal and cultural dimensions' and 'predominantly linked to sustainable development and human ecology', it is possible to note a certain desire to include the concept of territorial management to the register of geography and territorial planning by clearly marking the difference with the sciences of management. Indeed, Ruegg (1997) emphasises that the term of territorial management is entirely distinct from that of 'economy' and 'management' terms in the sense that it is not a question of managing resources or an ecosystem, or considering it as a support. However, still according to Ruegg (1997: 146), the semantic boundaries between territorial management and territorial planning are less rigid, because 'starting from management, it is enough to modify a few letters to make emerging "territory planning"' (*aménagement du territoire* in French) from the 'territory management' (*management territorial* in French). Questioning a strategic dimension of planning, Friedmann (2004) emphasises the lack of sources applied to urban and regional planning studies and underlines the scattered side of the management, which focuses generally on a business analysis. As, for example, in case of Mintzberg (1994); see also Mintzberg et al, 1998) who refers mostly to strategic thinking than to strategic planning. Nevertheless, Friedmann (2008) clearly states the need for interdisciplinary research in planning studies development.

This divide between management sciences and human geography within the concept of territorial management also emerges from the selective positioning of researchers in management. Indeed, management research distances itself from the geographical approach and definitions by raising the 'rigidity and technicality of geography as discipline' (Hernandez, 2017: 22). However, the 'technicality' of geography would potentially provide effective solutions (urban, economic, managerial, cultural and so on) to, a priori, better organisation of space and meeting of population needs.

Territory as an object and subject of study of territorial management

The concept of territory is multidisciplinary (Arnaud and Soldo, 2015), but above all polysemic (Macé, 2007; 2010; Kananovich and Macé, 2022). Management science agrees on the positioning of the user and their interactions at the centre of the territory definition, namely 'it is a space perceived and experienced by a set of stakeholders' and which is not limited to a simple institutional or administrative definition (Arnaud and Soldo, 2015: 116). However, the definition by geographers is not unanimous within the discipline community and can go as far as questioning the legitimacy of the use of the word 'territory' as 'to everything comes and goes' (Ripoll and Veschambre, 2013: 263). Nevertheless, the interest in analysing the territory through the geographical prism is also explained by the integration of elements which both complement each other and find themselves antagonistic, those of territorialisation and territoriality that Ruegg (1997) identifies as the institutional territory and the relational territory respectively. Understanding these elements is essential both for the conceptual anchoring of territorial management, but also for the understanding of its complex relationships with management science.

The definition of territory in management refers to a perimeter of life, or a lived space shared by different stakeholders with multiple purposes and positions (Zardet and Noguera, 2013). However, this space is characterised by an absence of hierarchical links between its stakeholders, which makes it similar to a weakly structured organisation (Logié, 2000). This instability in terms of the interactions of several stakeholders leads the public actor to offer a limited, bounded and controlled space in order to be able to manage it (Gaudin, 2002). This control is carried out within the framework of the geographical contours formalised by the government. Thus, following the philosophical meaning of Montesquieu and Rousseau, the territory comes under the authority of the state and represents the place of exercise of public policy. In this sense, the territory is similar to the notion of the 'territory of power' designed by the state and opposite to the 'territory of knowledge', that of 'lived territory' shaped by the stakeholders (Kananovich and Macé, 2023). Although the definition of the lived territory in management sciences lacks formalisation and is hardly used in the analysis of inequalities in access to care, it has been formalised and operationalised in health geography.

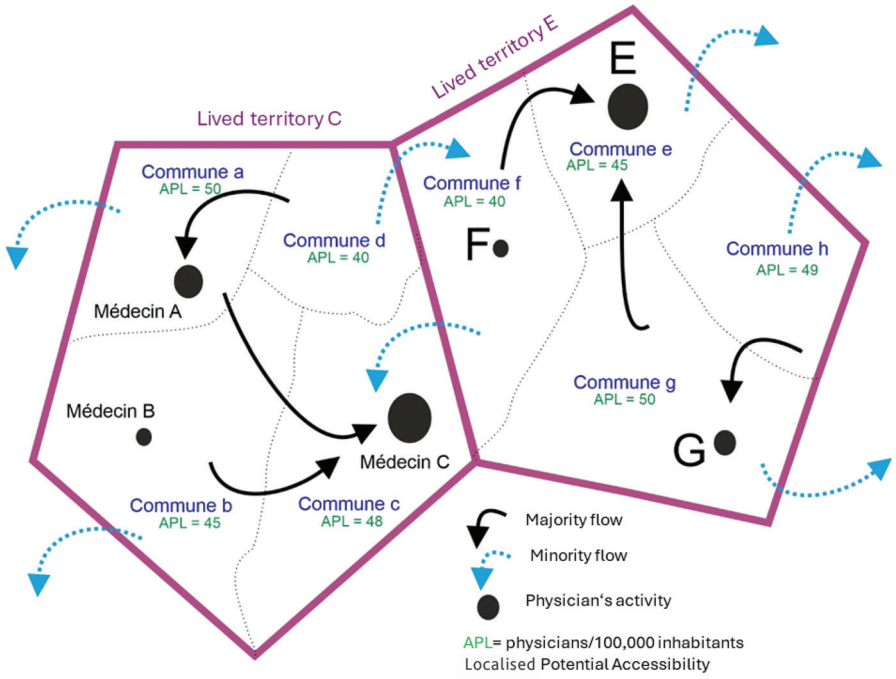
The term of the 'lived territory' as a basis for constructing an inter- and transdisciplinary approach to health

Territorial management and health geography share the same vision of the definition of the lived territory, namely a territory which presents itself as a social construction, dynamic and defined by its stakeholders. However, the application of the 'relative flows' method used in health geography helps to identify the scope of users' real practices (Figure 1). This methodology reflects the real spatial practice of users and thus offers an operational tool for reflection for territorial stakeholders, particularly healthcare professionals, in the definition of the territorial health project. Indeed, the construction of this model is based on the real space practices of users in a given territory towards healthcare professionals without being limited to administrative borders. In fact, administrative limits do not make sense in users' recourse to care.

Thus, the operationalisation of the lived territory within the territorial management framework allows taking into account the real dimension of the consumption of healthcare by users and better identifying the territories facing the physician shortage.

The operationalisation of the lived territory is based on a geographical approach of the identification of 'departure–arrival' flows which are analysed according to the 'relative flow method' set up by INSEE in 1975 (Terrier, 1978; Bessy and Ronsac, 1986). First transposed to the hospital sector (Macé, 2007), this technique analyses the 'home–care services' flow of users, namely 'home–general practitioner's office' in this case (Figure 2). As shown in the diagram in Figure 1, each arrow symbolises the relative majority direction of flows concerning the use of general practitioners. The method is then based on a 'descending sorting' from each 'user departure location' to all 'user arrival locations' (Kananovich et al, 2018). The municipalities are then classified without overlap or omission, according to the importance of their place of origin and destination. All the municipalities whose general practitioner majority flows (even relative) are oriented towards the same general practitioner, belong to and then constitute a health area of general medicine, that is to say, a 'general practitioner lived territory'.

Figure 1: Constructions of the model of the lived territory using the 'relative flows' method



Source: Authors.

Figure 2: Formula for defining majority direction of users towards a physician's office, where: 'a' is a spatial entity of 'departure' of the flows and 'A' is a spatial entity of flow arrival

$$\text{Majority tie 'Home-Physician's office'} = \frac{\text{Flows coming from the municipality 'a' to the physician's office 'A'}}{\Sigma\text{Flows coming from the municipality 'a'}}$$

Source: Macé, 2007: 57.

The identification of these fragile territories represents a major challenge for healthcare professionals both in their own work organisation (setting up the on-call duty roster, managing the redistribution of patients within their lived territory in case of unavailability of their referring physicians and so on), but also in the preparation of the health project negotiated with the regional public policy maker (the Regional Health Agency, ARS, in France). Furthermore, the operationalisation of the term of the lived territory represents a federating element of cooperation in territorial management, which allows introducing the daily practices of medical doctors into the formalisation of the health project on the territory and meeting users' needs in healthcare in a most effective way.

Presentation of the case study

The benefit of the application of the inter- and transdisciplinary approach in the context of challenges of access to healthcare can be explained by the complexity of any health system and the room for manoeuvre available to each system actor (Kananovich, 2021). The organisational specificities of the French health system define a particular operating matrix where decisions are centralised at the state level. The French healthcare system operates under a Bismarckian model financed today through joint payroll and tax contributions, combining mandatory public health insurance (called in French *Assurance Maladie*) with optional private complementary coverage. Mandatory coverage funds 79 per cent of healthcare costs, while complementary insurance and households cover 14 per cent and 7 per cent, respectively.

However, the healthcare management is partially dual-structured, with decentralised services coexisting alongside the predominant authority of deconcentrated ARS. Since 1982, French local authorities (regions, departments, municipalities and so on) have held devolved decision-making powers and administrative responsibilities. In healthcare, municipalities provide support to healthcare professional installations, departments finance maternal and child protection services and regional councils oversee paramedical schools and collaborate with ARS to develop regional health plans. As the director of a regional health agency is appointed by the Minister of Health, thus all decisions made by ARS are deconcentrated. The ARS directors ensure the implementation of national health policies through regional health plans, regulate hospital care authorisations and appoint public healthcare directors. However, the installation of physicians is exempt from the jurisdiction of deconcentrated administration, in accordance with the 1971 law. Indeed, French legislation enshrines the 'freedom of establishment for physicians' as part of its 'fundamental deontological principles'. Renaudie (2020: 903) speaks of the territorialisation which is taking place in France 'not within the framework of decentralisation, but within that of deconcentration'. Thus, the analysis of territorial management in health in France must be placed in its context which is characterised by a limited room for manoeuvre of local actors (municipalities, group of municipalities) and the tensions among the actors of the system, namely the medical professionals (and its organisational and institutional configurations, such as the Regional Union of Care Professions [URPS]) and the public policy maker ARS. In this context, the room for manoeuvre of system's stakeholders is the permanent subject of power games between the 'territories of power' and the 'territories of knowledge'.

In France, the institutional framework of 'territories of power' is formed by a succession of nested territorial networks of municipalities, cantons, departments and other regions constituting the territorial base of the elective and administrative powers, the executive and the legislative, the central power and the local power. This centuries-old French territorial organisation maintains an atavism of opposing 'Girondins' to 'Jacobins', that is to say, opposing the supporters of 'federalism' to those of 'centralism' (Kananovich and Macé, 2022). In this context, territorial health management is shaped by the legislative framework and the public policy makers attempt to respond effectively to the care needs of the population, as well as to the effective management of limited resources.

Thus, four health territory management strategies can be identified in a historical approach in France: laissez-faire, which is a growth strategy during the Thirty Glorious

Years (1945–70); a strategy of blocking the supply by health sectorisation, followed by supply organisation strategy to finally lead to a reversal of perspective relocating the centre of interest around the patient (healthcare demand), and removing a supply-oriented strategy developed by the public policy maker for half a century. From 2010, public policy maker guaranteed to territorial stakeholders, particularly healthcare professionals who until then had been excluded from the reflection on territorial management strategy, the participation in the definition of health territorial project. Given the duality between the deconcentrated administration of the ARS on one hand, and the decentralised organisation of healthcare professionals, represented by the Professional Territorial Health Communities (CPTS) established by the 2009 (Law No. 2009-879 of 21 July 2009 on hospital reform and relating to patients, health and territories) and 2016 (Law No. 2016-41 of 26 January 2016 on the modernisation of our health system) laws on the other, a coherent territorial organisation – a territorialisation – is required. To achieve this, a dialectical interplay between the 'territory of knowledge' and the 'territory of power' is imperative: the decentralised local level provides the 'territory of knowledge', meaning an understanding of territory healthcare needs, while the 'territory of power' represented by the deconcentrated level, that is, ARS, ensures an effective management of public policies.

The Centre-Val de Loire region holds the sad record for the lowest physician density in France. The situation in the region is particularly worrying in terms of general medicine, where in 2024, the density of general practitioners reached the rate of 101 doctors per 100,000 inhabitants compared to 125 per 100,000 inhabitants nationally. Although the regional population increased by 2 per cent between 2013 and 2022, the consumption of care by general practitioners among regional Indigenous people decreased by more than 18 per cent, going from 4.16 to 3.32 consultations per inhabitant. Confronted by this low medical density, care professionals acting through the URPS seek to optimise their territorial organisation in the context of the limited care offer. This reflection is occurring in the context of the implementation of the territorial health project, namely the CPTS, who has to be negotiated with the regional public policy maker, the ARS. The URPS for Centre-Val de Loire brings together 2,620 general practitioners within the territory, who participate in the shaping of a strategic territorial health project. However, the realisation of this territorial project requires the approval of the public policy maker, particularly in terms of financing the measures proposed in the project (such as setting up on-call duty and managing the redistribution of patients within their lived territory in case of unavailability of their referring physicians and so on). However, the implementation of the project also requires an operational and understandable territorial grid both for healthcare professionals and the public policy maker, the ARS. Thus, the term and the technique of lived territory were used by the URPS healthcare professionals in order to understand the real needs of the territories in terms of care consumption and thus optimise their interventions. The scope of interventions was initially limited to general practitioners representing the front line of access to care.

Research methodology

The methodology of the present research is based on an analysis of the spatial practices of territory users through the lived territory method, as well as interviews

with the project principal investigator and geographer within the URPS for Centre-Val de Loire. These interviews allowed the chronological restitution of the gathering of general practitioners around the concept of the lived territory and its use as a support in negotiations with regional public policy maker the ARS. First, a visualisation approach was proposed to physicians consisting of drawing a mental map of their area of practice based on the perception (non-academic knowledge) of the flows of patients from their patient base. Then, the construction of the territories experienced according to the health geography method of relative flows was put in place and mapped. Then, the mental maps and the mapping of the lived territories were presented to physicians and allowed the approval of the method by medical doctors. The construction of the lived territories of the Centre-Val de Loire region is based on the SNIIRAM database, which is a national inter-scheme health insurance information system comprising healthcare consumption data by users in France.

The analysis of two disciplines is carried out following the logic of interdisciplinary and transdisciplinary research and had opted for the 'integrative-synthesis' mode in the analysis of the evolution of two disciplines, as well as the 'subordination-service' mode (Barry et al, 2008: 28) in the operationalisation of the lived territory concept in territorial management. Thus, the semantics specific to two disciplines was retained in terms of defining the lived territory as 'a space perceived and experienced by a set of stakeholders and which is not limited to a simple institutional or administrative definition' (Arnaud and Soldo, 2015: 116).

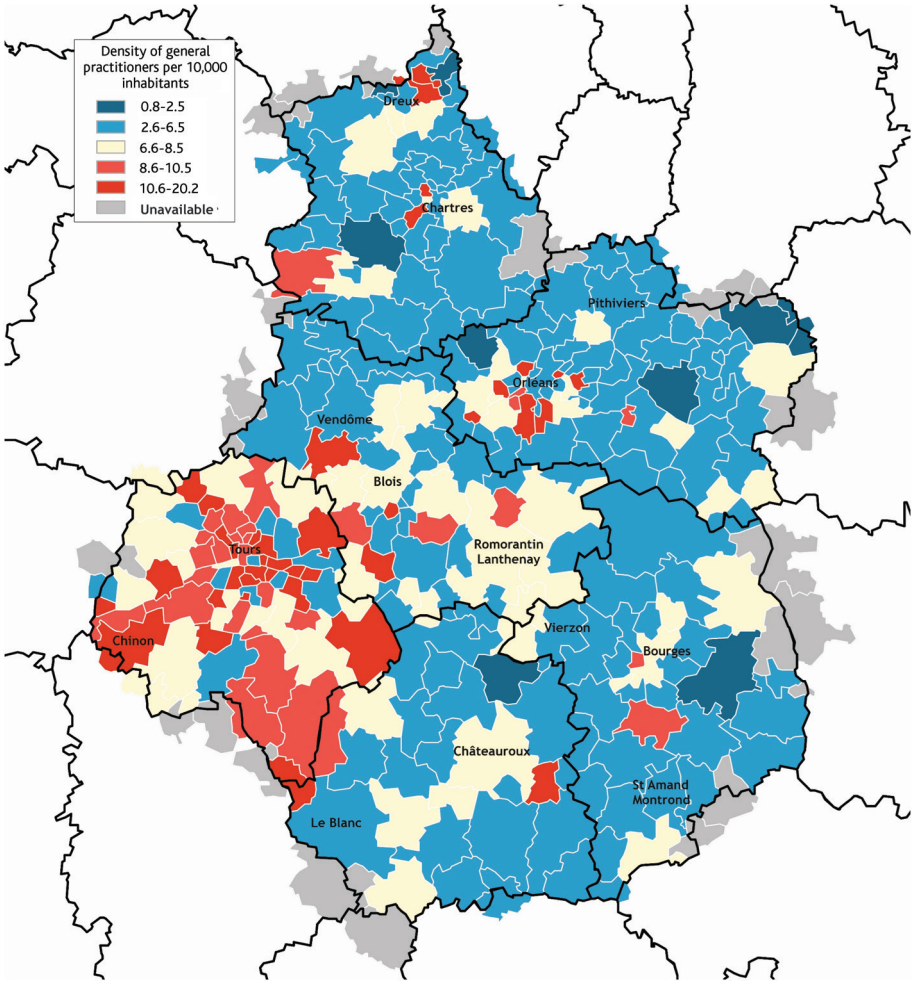
Results

The application of the approach through the perception of reality by physicians and its mapping with mental maps (non-academic knowledge) allowed the principal investigator, a health geographer, to gather healthcare professionals around reflection on their practices and the coverage of population healthcare needs in the territory.

However, it is important to note that the approval of the lived territory approach by the physicians was not automatic and immediate. Indeed, the complexity of the approach made general practitioners doubt of its adequacy in terms of correspondence to their professional practices and the patient flows. In order to explain the interest in the method and to gain the support of medical doctors, the principal investigator of the project set up an intermediate stage of the construction of the territory using the mental map. In fact, all general practitioners participating in the project were asked to draw their 'coverage territory' in terms of the places their patients come from. The comparison of the territories 'perceived' and drawn from the general practitioners' intuitive knowledge to those constructed with the lived territory approach revealed a quasi-identity of the intuitive and formal approaches (or knowledge). Indeed, the physicians' mind maps and lived territories map matched almost perfectly. Thus, an intermediate stage of comparing the intuitive (or non-academic) general practitioners' knowledge with formalised knowledge (those of lived territory) has facilitated the understanding and acceptance of the technical approach that of the lived territory, by general practitioners (Figures 3 and 4).

Furthermore, a formalised and mapped approach of lived territories within the Centre-Val de Loire region enables the URPS to obtain the agreement with the policy maker, ARS, regarding the setting up of the territory project (Figure 5).

Figure 3: Density of general practitioners

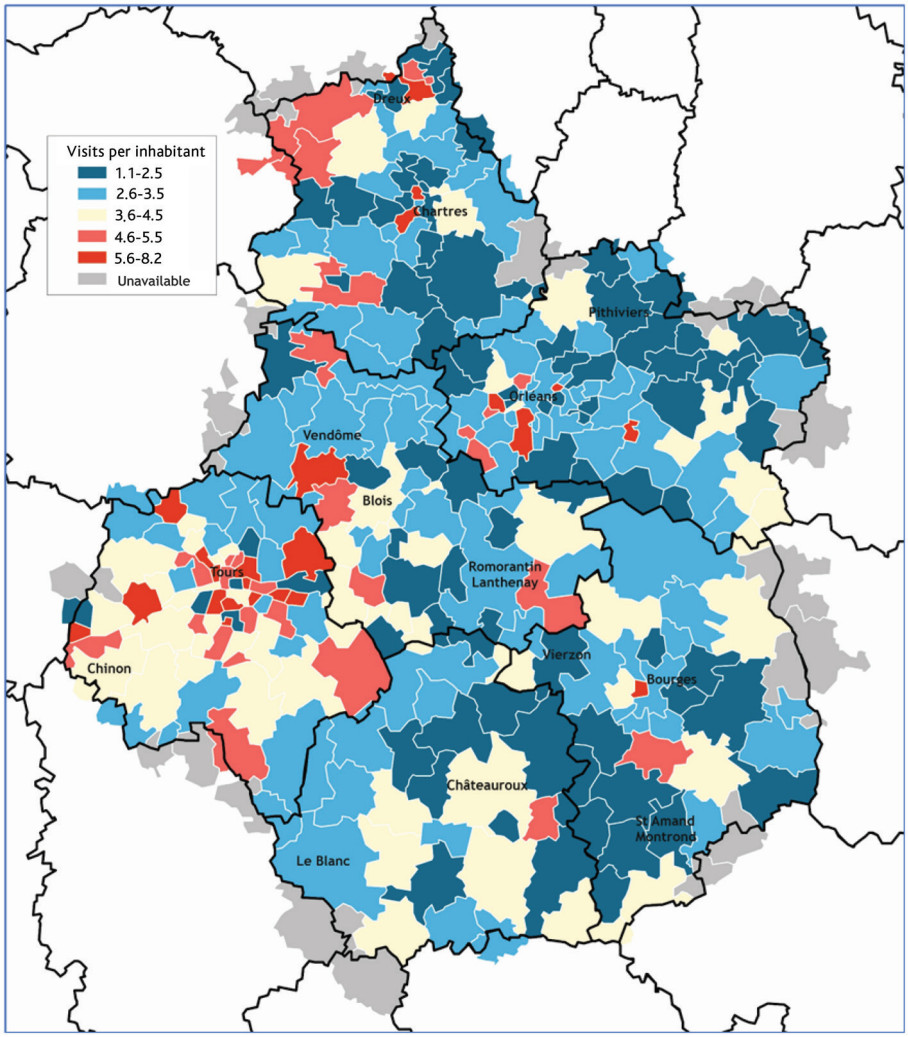


Source: Authors.

Discussion

The application of the interdisciplinary and transdisciplinary approach in territorial health management represents an opportunity to respond to complex issues (Stern, 2016; Breslin et al, 2020), notably defined as the 'wicked problem' (Klein, 2017: 30), that of healthcare access. The French health system, which is characterised by strong centralisation and the conflicting tensions between the stakeholders in terms of management of the system itself, as well as within the territory, represents an informative case study. The originality of the French healthcare system is based on the freedom of the patient to choose their doctor and the hospital, both in the public and private sectors, guaranteed by the law. The liberal configuration of the healthcare system (Law No. 71-525 of 3 July 1971) which allows any doctor to choose their place of practice, reinforces territorial inequalities in terms of access to care in an already strained context, due to the ageing of the population, on the one hand, and the retirement of physicians, on the other.

Figure 4: Number of visits per inhabitant

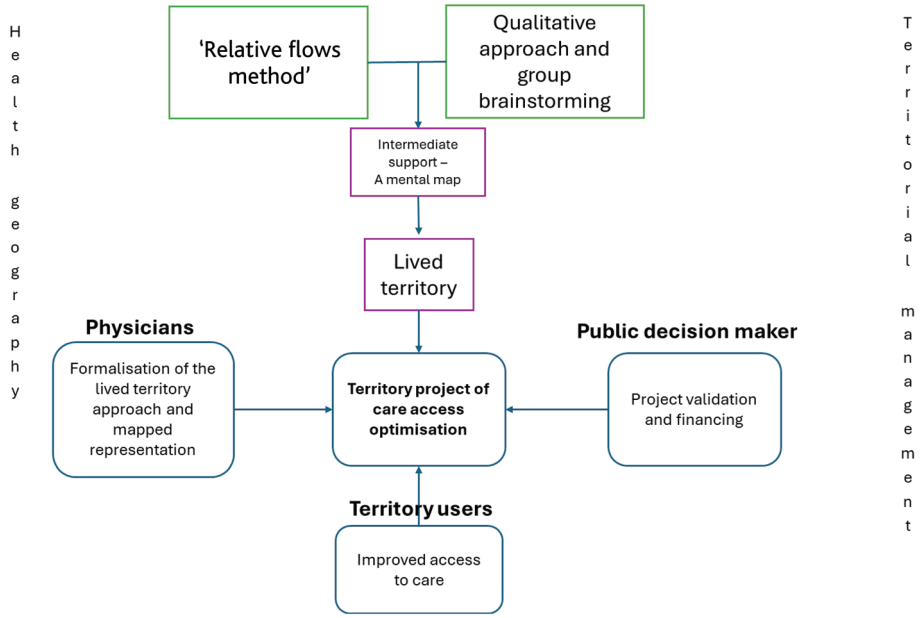


Source: Authors.

This context requires an application of approaches and tools not only allowing addressing stakeholders' issues, but whose meaning is imperatively shared by the actors. Thus, the desire of health geography to evaluate inequalities in access to care meets the stakeholders' management objectives regarding the territory operationalisation with effective tools. Sharing the same term of 'lived territory' in both disciplines helps to avoid the confusion of interpretation that each discipline assigns to the definition of the term (Vienni-Baptista et al, 2023).

The inter- and transdisciplinary crossing of a health geography operational approach with a management participatory approach in the application of the lived territory concept within a territory project has enabled operational and effective management of access to general practitioners' care within the Centre-Val de Loire territory in a context of a considerable lack of care professionals. Furthermore, inter- and transdisciplinary approaches have allowed a better formalisation of the understanding

Figure 5: Empirical application of inter- and transdisciplinary approach



Source: Authors.

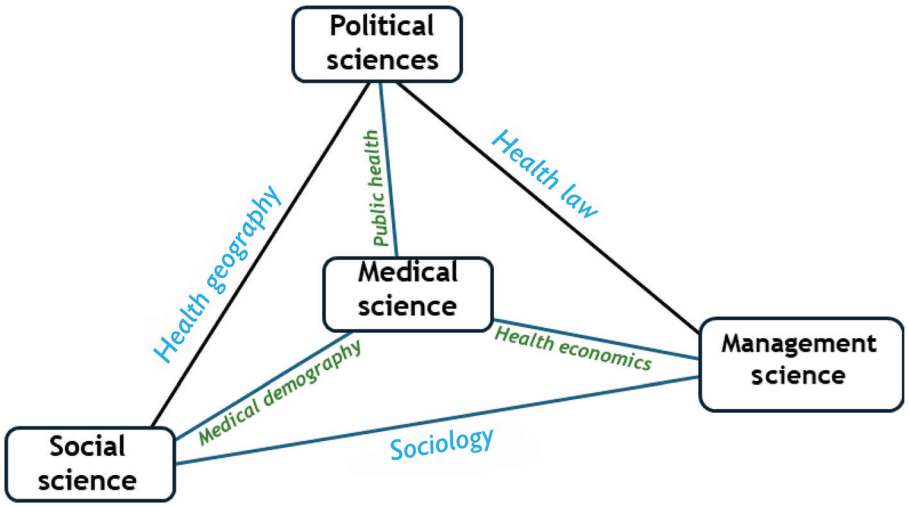
of the problem by local stakeholders, notably general practitioners, both in the design of the health project and its negotiation with the supervisory authority, namely the ARS. It is possible to underline a facilitating role of the inter- and transdisciplinary approach in the management of wicked problems, in particular that of access to care in the context of strong constraints and a conflict relation environment. Indeed, the formalisation of the term commonly shared by the two disciplines, through a rigorous method understandable to all project participants, allows the establishment of a common ground between the public policy maker and the territory stakeholders. The lived territory becomes a negotiation platform or a boundary object (Star and Griesemer, 1989; Groot and Abma, 2021) in the implementation of the bottom-up logic in the space organisation.

In addition, the application of inter- and transdisciplinary approach within territorial management in the health sector reveals its empowerment role regarding the physicians' participation in space organisation. Indeed, although health professionals are considered important stakeholders in the health system management, knowledge of their territory of practice is mainly based on a perception of reality. As underlined by (Albert et al, 2008; 2020), the majority of healthcare professionals' knowledge comes from medical sources, thus making them poorly prepared for the management of complex issues such as optimal management of the healthcare supply in the context of strong spatial disparities in access to care. The integration of the lived territory concept in the space organisation project allowed to transform the physicians' non-academic knowledge into a formalised one and thus to participate efficiently in negotiation with the public policy maker.

Thus, the study attempts to provide both an academic and a practical contribution to the problematic. As an academic contribution, the article emphasises the

operationalisation of the lived territory approach and its application in territorial management by taking into account the real users' spatial practice of healthcare consumption as well as physicians' perception of their territory of practice. As a practical contribution, the article highlights the importance of a relevant territorial grid in the territorial diagnosis as a basis of participative approach in responding to the physicians' shortage in the territory. Indeed, in the health systems based on a liberal configuration granting a free choice of place for physicians' medical practice, as well as a free choice of a medical doctor by the users, the physicians' involvement in territorial management represents an effective way to respond to the growing problem of medical deserts. As doctors do not benefit from operational training and even less from territorial analysis during their studies, the better understanding of the challenges of their territory of practice allows them to participate efficiently and jointly with public policy makers in response to territorial difficulties of access to care. In this context, the present study proposes a lived territory approach as a platform of possible cooperation between physicians and public decision makers. This approach places the patient at the centre of concern, as the territory representation and management are based on the spatial practice of users' care consumption. Finally, the lived territory approach allows the public decision maker and territorial representatives to evaluate the real situation of the healthcare offer in the territory and thus to customise further healthcare policy regarding resource allocation. Indeed, this approach helped to emerge as an operational and effective solution in the context of tension and divergences in the positioning of health system stakeholders, such as political top-down positioning, health professionals' resistance and population distress. However, the results of the study highlighted a broader transdisciplinary field involved in thinking about the healthcare access issues. Indeed, the behavioural models of health system stakeholders based on their system of knowledge have highlighted the significant involvement of political and medical sciences in the implementation of solutions for better and equal healthcare access (Figure 6).

Figure 6: Inter- and transdisciplinary approach is territory health management



Source: Authors.

Thus, this research considers that the mobilisation of the concept of lived territory allows both facilitating the application of the inter- and transdisciplinary approach to the care access project and providing an adequate response in understanding of population healthcare needs. Better understanding of population healthcare needs potentially guarantees not only the provision of adequate responses to complex problems such as care access, but also the respect of the principles of health democracy.

However, it is important to mention the limits of the proposed approach. Indeed, the operationalisation of the lived territory concept requires the availability of databases regarding the socio-demographic information, healthcare consumption and the flows of the population in a country. This supposes a certain level of organisation of the health system and the openness of stakeholders to cooperation. The analysis of the impact of 'stakeholder games' (Crozier and Friedberg, 1977) on a project conception and negotiation within the framework of the inter- and transdisciplinary approach represents a potential research subject.

Conclusion

Analysing territorial management through the interdisciplinary and transdisciplinary approach and under the prism of management and health geography allowed the study of an ideological and conceptual body of the discipline still in development and construction. Although the concept milestones have been implemented by geographers in a desire to construct territories based on human interrelations networks, geography and planning focus more on reflection around the methods of territory construction (or the legitimate use of the term 'territory' itself), while management sciences struggle to propose an operationalisation of the concept to the territory stakeholders. However, an application of the inter- and transdisciplinary approach within the framework of a health territory project in a French region highlighted both the practical and academic interests of this approach. Indeed, the crossing of disciplines through the commonly accepted vocabulary of 'lived territory' allowed the finding of common ground between policy makers and care professionals in the context of the implementation of the territory project. The better understanding of the physicians' practice territory has been achieved through the comparison of doctors' intuitive knowledge with the maps constructed according to the lived territory method. Thus, this helped to transform physicians into active territory stakeholders and helped them to negotiate the implementation of the territory project according to their operationalisation vision with the public policy maker. Moreover, the territory organisation based on a lived territory approach allowed the maintenance of a comparative mortality index in the region at the level of the national average despite a significant shortage of physicians in the region.

From an academic point of view, the intersection of the disciplines of health geography and management in general seems to be very rare, although it is not uncommon to hear geographers and urban planners using the terms of 'participatory approach' and 'stakeholder games' during conferences (in France) as well as using of qualitative methods. However, it is unusual to observe an operationalisation of these terms through management concepts. In the same way, management sciences, particularly in a French-speaking space, seem to share the grounds of the quantitative and qualitative approaches within the discipline itself, which therefore does not make them more willing to open up to the geography techniques of quantitative analysis.

Furthermore, the application of territorial management in health seems quite rare, as it mainly focuses on environmental issues. However, as demonstrated in the present study, the mobilisation of management and health geography within the framework of an inter- and transdisciplinary approach represents a particular interest in both disciplines. This allows both the consolidation of the field of territorial management in the direction desired by management, that of action and operationalisation of stakeholders facing the challenges of access to care, and a greater operationalisation of the social phenomena analysis for the geography. This interaction was facilitated by the presence of a common semantics referring to the lived territory, as the most optimal method of managing the challenges of access to care within the territory. Furthermore, the inter- and transdisciplinary approach applied within the framework of this study made it possible to highlight the involvement of other disciplinary fields in the reflection, including notably political sciences and medical sciences.

Finally, the richness of the inter- and transdisciplinary approach provides a source of inspiration and knowledge for local stakeholders in implementing solutions better adapted to users' needs in care and thus guarantees the respect of health democracy principles within the territory.

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Data availability

The authors take responsibility for the integrity of the data and the accuracy of the analysis. Restrictions apply to the availability of these data, which were used under CNIL licence for this study.

Conflict of interest

The authors declare that there is no conflict of interest.

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