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Interprofessional collaboration between general practitioners and primary care nurses in Belgium: a participatory action research

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ABSTRACT

Given the sociodemographic challenges facing the Belgian primary care system, it is essential to strengthen interprofessional collaboration (IPC) between healthcare providers. Therefore, our aims for this study were to assess IPC between general practitioners (GPs) and nurses; identify target priorities for improving IPC; and facilitate the planning and implementation of the proposed improvement strategies. Based on diversity criteria, six groups of GPs and nurses were chosen for a participatory action research. Participants performed a SWOT analysis of their IPC to identify strengths and weaknesses of their collaboration practice configurations. Main factors limiting IPC were related to the type of financing system which impeded or facilitated multidisciplinary team meetings, a weak functional integration, and a lack of interprofessional education. Overall, communication and task delegation were co-identified as common priorities. Actions prioritized by each group were related to these two priorities and accounted for local, specific needs. Communication could be supported through improved tools and dedicating time for multidisciplinary team meetings. Task delegation was more challenging and raised questions related to nurses' training, legislation, and payment systems. IPC seems to be easier to achieve when healthcare professionals belong to the same organization and consider themselves a team.

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Interprofessional collaboration; primary care; communication; task delegation; participatory action research

Introduction

Over the last decade, there has been a consensus on the need for stronger primary care able to deliver comprehensive, integrated and accessible care to patients and communities (Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, 2011; Groenewegen et al., 2013; Kringos et al., 2010). Teamwork and interprofessional collaboration (IPC) have been highlighted as essential principles underpinning effective primary health care systems (Morgan et al., 2015; Murray et al., 2008), and also function as a strategy for efficient organization of health care services (Sangaletti et al., 2017). Despite these demonstrated benefits, IPC between general practitioners (GPs) and registered nurses (RNs) is still suboptimal (Sollami et al., 2015). Barriers in the establishment of effective IPC include the historical role of doctors as primary clinical leaders and decision makers (MacMillan, 2012); hierarchical structures, such as privately owned general practices (McInnes et al., 2015); the lack of clarity around RNs' scope of practice (McInnes et al., 2017); and GP mistrust in nurses' knowledge and skills to perform competently (Akeroyd et al., 2009). Indeed, with the changing landscape of the healthcare system and the shift toward delivering care in the community, a much stronger IPC within primary care is needed now more than ever (Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, 2011). Therefore, improving IPC in primary care and enabling nurses

to work to their full potential have emerged as shared concerns of governments at the international level (McInnes et al., 2017), including that of Belgium.

Background

French-speaking regions of Belgium (also known as Wallonia) face a series of challenges related to their aging population and those with comorbid chronic diseases. In 2018, 34% of Walloon people aged 65 years and older were estimated to be frail, while another 24% were at high risk of frailty (Nguyen et al., 2019). Also in 2018, the percentage of people who suffered from a chronic disease was significantly higher in Wallonia (32.7%) than in the Flanders (27.6%) or Brussels (28.7%) regions (Van Der Heyden & Charafeddine, 2019).

Additionally, the cost of the Belgian healthcare system is slightly higher than in the EU-15 countries (Belgian Healthcare Knowledge Center, 2016). Areas where savings could be made are mainly related to the overuse of investigations and equipment, and long hospital stays, which have led to early discharge policies and the development of 'hospital-at-home' programs, which further strain the primary care system. This situation is of concern when coupled with a workforce shortage and its unequal distribution across the country. The density of GPs is estimated at 6.92 per 10,000 in rural Walloon areas, while varying between 8.2 and 9.9 per 10,000 in urban areas (Agency for a life of quality [Agence pour une vie de qualité:

AVIQ], 2016). Furthermore, only 5.8% of active nurses work in home care (Federal Public Health Service, Food Chain Safety and Environment, 2016), which is insufficient to meet the growing demand for community-based care in the population.

Finally, Belgian primary care is characterized by a high heterogeneity of practices and payment systems for GPs and RNs, ranging from solo private practices to fully integrated health care centers or community health centers (CHC). In the private system, professionals are paid through fee-for-service and do not share a common patient list nor a patient's medical record. The latter integrated care systems use either capitation or fee-for-service systems (Karam et al., 2017).

In response to these system challenges, this study was initiated and funded by regional authorities who recognized the need for new service delivery models and an enhanced collaborative approach between GPs and RNs. These strategies aim to tackle the ongoing sociodemographic and economic challenges mentioned above. Overall, the study will 1) assess IPC between GPs and nurses; 2) identify target priorities for improving IPC; 3) facilitate the planning and implementation of the improvement strategies proposed by participants.

Conceptual framework

Reeves et al. (2010) present a new typology of interprofessional practice based on a contingency approach (Reeves et al., 2010). The authors distinguished between four main types of interprofessional work that would be more relevant or effective, depending on local needs. These are teamwork, collaboration, coordination and networking. In this approach, collaboration is seen as a looser form of teamwork in which team tasks are generally more predictable, and less urgent or complex as is usually the case at the primary care level. The authors also offer a conceptual framework comprising four domains that influence teamwork and IPC: relational, processual, contextual and organizational factors (Reeves et al., 2010). We use this framework as a comprehensive assessment model of IPC in a primary care context.

Methods

Setting and participants

During October 2017, we sent out a general call for candidacy to GPs and RNs practicing in Wallonia using diverse communication channels; namely professional associations, e-journals, and e-mails. Six applicant groups (or LARGs: *Local Action Research Groups*) were selected based on the diversity criterion (see Table 1). We aimed for diversity in terms of practices of both professions, payment systems, human resources, and demographic characteristics of the population served by the geographic area of the practice. Each LARG was comprised of a combination of RNs and GPs who worked together but with varying collaborative structures, and who were motivated to improve their IPC. A total of 11 GPs and 16 RNs participated in the project.

A steering committee was established consisting of representatives of both professions, regional authorities, and patients. The mission of this committee was to monitor the progress, give insights on preliminary results, and provide input on policies relevant to those results and other related topics.

Design

We followed Grodos and Mercenier (2000) methodological approach for health services participatory action research (PAR) (Grodos & Mercenier, 2000). The choice of a bottom-up PAR approach stems from our aim to generate outcomes that are relevant and beneficial to the stakeholders impacted by this research, thus effecting social change (Macaulay et al., 2011). The PAR took place on two interrelated levels, informing one another iteratively: the LARG level generated contextual data while the meta level pooled results through evaluating all cases together to draw generalizable conclusions relevant to the Walloon context.

The PAR started with the general problem statement and the choice of a relevant conceptual framework to better understand it. Next, with the facilitation of the researchers, each LARG engaged in a Plan Do Check Assess type of cycle consisting of the following steps: an in-depth analysis of each LARGs' respective contexts and experiences of IPC; the

Table 1. Characteristics of the selected LARGs.

	LARG 1	LARG2	LARG3	LARG 4	LARG 5	LARG 6
Rurality/urbanity	Rural	Rural	Rural	Urban	Urban	Urban
GPs density/10.000 population*	6.39	5.25	9.56	7.78	8.90	7.58
Type of GPs' practice	Solo Self-employed	Solo Self-employed	Multi-disciplinary group GPs: Self-employed RNs: Salaried	Mono-disciplinary group Self-employed Monodisciplinary group Self-employed	Multi-disciplinary group Salaried	Monodisciplinary group Self-employed
Type of RNs' practice	Mono-disciplinary group Self-employed	Solo and mono-disciplinary group Self-employed and salaried				Solo Self-employed
Payment system (GPs/RNs)	FFS	FFS	FFS	FFS	Capitation	FFS
Number of participants (GPs/RNs)	2/4	1/3	2/2	2/2	2/2	2/3

Legend: FFS: fee-for-service
 *Source: Walloon Public Service. The portal for local statistical information on Wallonia (Iweeps). 2018. (Walloon Public Service, 2018)

formulation of their IPC improvement priorities followed by a strategy selection and the development of an operational plan; the selected plan's implementation and evaluation; and finally, a situation analysis of the new context. The pooling of results allowed us to create links between the various contexts to generate a holistic understanding relevant to all participants. Furthermore, it highlighted common issues related to IPC that require improved understanding (see [Figure 1](#)). This reflection took place during regular quarterly meetings of researchers, participating LARGs, and the steering committee.

Data collection and analysis

In accordance with PAR principles, data collection and analysis were conducted concurrently and iteratively. Between November 2017 and February 2019, researchers met monthly with each LARG. The first meetings covered the same topics across all participating areas, namely examination of intent, experiences, expectations, and fears of participants related to the PAR project. This was followed by a participant analysis of their local IPC, guided by Reeves et al. (2010) framework for interprofessional teamwork. Results were pooled into a strength, weaknesses, opportunities, and threats (SWOT) analysis through a deductive thematic analysis approach. Pooled results were validated during the first quarterly meeting.

Based on this self-evaluation, each LARG then identified their own priorities and took a specific path for the planning and implementation of improvement strategies with the methodological support of researchers. LARGs were also asked to identify common issues to be studied in-depth as milestones for this PAR. They engaged in an interactive exercise of priority

ranking that resulted in the identification of two common priorities: communication and task delegation.

Data collection and analysis of communication was conducted in three phases through the following: Group discussions during monthly meetings with LARGs: Discussions were guided by an analysis grid developed by the research team (see [Online Supplement](#)). They aimed to collect detailed information about existing communication tools, their current use, perceived benefits and challenges of each, and ideas for improvement. Group discussions were documented and transcribed.

An online survey for representatives of GPs, RNs, and patients within the steering committee: Five open-ended questions investigated the current difficulties, improvement priorities, expectations of political leaders, and possible solutions (see [Online Supplement 2](#)). Thematic analysis of data collected from both phases was conducted by researchers and preliminary results were transmitted to participants ahead of meetings which were then discussed and validated during quarterly meetings.

Expert consultations: experts in information technology and from the regional platform for shared electronic health records (EHR) also received the preliminary results and were asked to provide reflection and feedback during participation in one of the quarterly meetings.

Data collection and analysis of task delegation followed a similar strategy: 1) group discussions during monthly meetings explored barriers and facilitators, as well as ideas for improving task delegation (see [Online Supplement 3](#)); 2) expert consultations: experts from the CHC Federation and the organization of professional reinforcement for primary care nurses

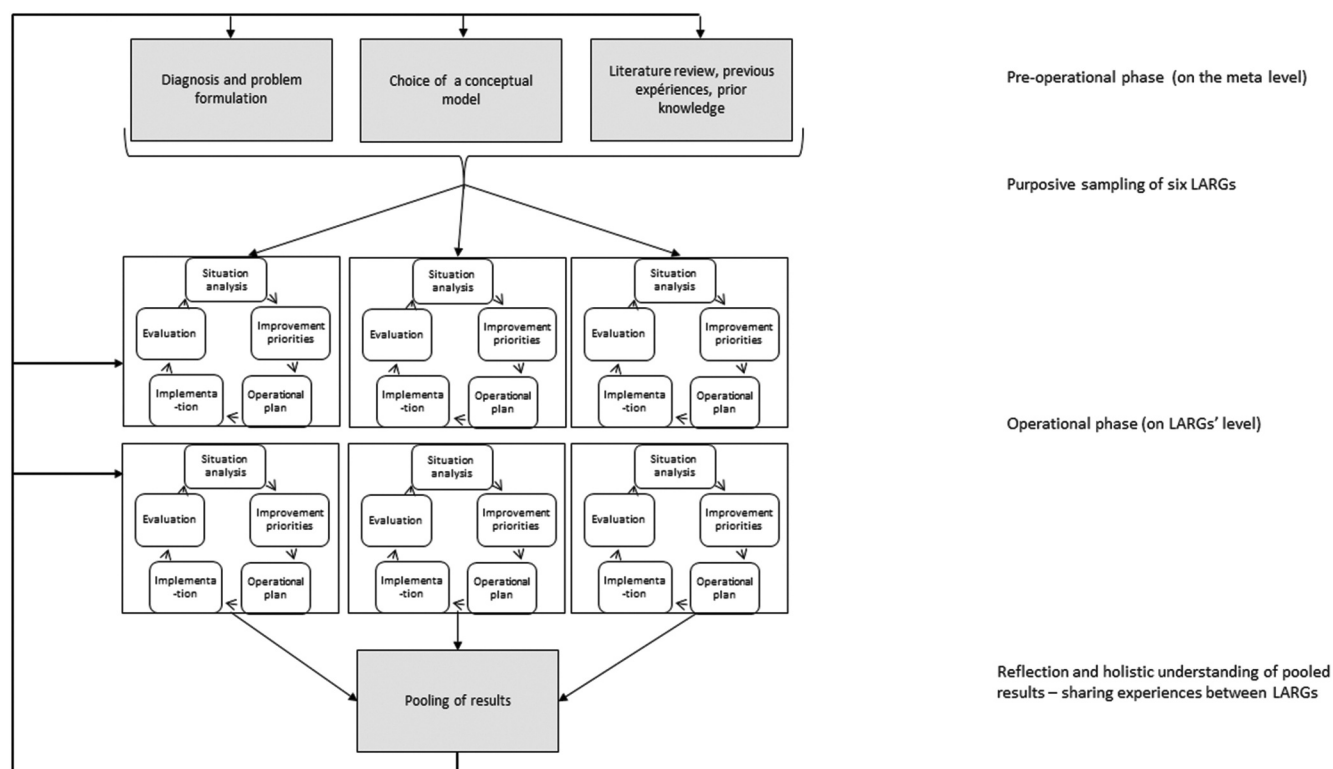


Figure 1. Health services participatory action research followed in this project.

Source: adapted from Nitayarumphong and Mercenier (1992) in Grodos and Mercenier (2000). Permission to reuse this figure was obtained from ITG Press.

were consulted about legislative and administrative issues related to task delegation. They were also invited to one of the quarterly meetings.

Ethical considerations.

Our study did not involve any patients nor patient relatives, nor did it require that patient data be shared with researchers. Therefore, our study did not fall within the scope of the Belgian Law of 7 May 2004 on Human experiments (The Belgian law of 7 May 2004 on Human experiments, 2004) and thus, did not require the approval of an ethics committee, nor written consent from participants. However, ethical considerations were present at all stages of the project. Specifically, each LARG was informed of all aspects of the PAR throughout the study process. Research teams endorsed LARGs' projects with a respectful, non-judgmental attitude. Every LARG also received a synthesis of the discussion within their group and was given the possibility to add specifications and amendments, if necessary.

Results

We will first present the results of the six LARGs self-assessments of IPC. Next, we will briefly present the actions prioritized by each LARG and the common issues that emerged for all. Finally, we will focus on the in-depth investigation into communication and task delegation.

SWOT analysis of IPC in the different LARGs

On relational, processual, and organizational levels, experiences of collaboration seemed to be shaped by their local needs and context, consistently with Reeves et al.'s (2010) contingency approach. In our contexts, the teams' tasks were generally predictable and less urgent and complex than what an acute setting would require. Yet, interprofessional work called for shared accountability and clarity of roles, and could therefore be considered as "collaboration". However, despite the fact that shared team identity and integration may be less important in "collaboration" (Reeves et al., 2010), we observed these core elements of "teamwork" within CHC. Also, in CHC, professionals shared common patient populations, health records, resources, and spaces. Solo and independent practice configurations of both parties (GPs and RNs) presented some features of "networking" such as the absence of face-to-face meetings and mutual acquaintanceship. This resulted in a lack of trust and knowledge of the other's role and contribution to a patient's care. In these contexts, a significant workload and difficulties in establishing formal and informal communication paths were also observed.

Regarding the contextual domain, experiences of IPC within every configuration of practice were homogeneously influenced by a lack of integration policies and incentive measures encouraging IPC, as well as workforce shortages, and legislative and economic issues. Table 2 displays the pooled results of the six LARGs according to Reeves et al. (2010) conceptual framework on teamwork and follows a SWOT analysis structure.

Actions prioritized by each LARG

Priority improvement actions emerged from each LARG's self-assessment (see Table 3) in which they subsequently developed an operational plan, and implemented and evaluated, at least partly, the outcomes of their project. Each LARG progressed at their own pace and continued sharing this progress at quarterly meetings. They also connected outside the meetings to share ideas, best practices, and knowledge, as well as to give support.

Communication

Throughout the three phases of data collection described earlier, participants and stakeholders identified several important elements within existing communication. These results were synthesized into four categories: content of communication; communication pathways; information technology tools; and health and personal data security and protection.

First, participants found that *content of communication* does not always target the needs of each professional who generates and manages medical and care data. For example, nurses generate information on internal coordination or for administrative purposes (i.e. billing), which may not be of interest to GPs. Thus, more structured and focused information in nursing health records could be more useful to IPC. An example from one of the sessions is given below:

... The doctor wants to know if the patient has taken his treatment regularly or to have a more precise idea of their patient's functional capacities ... This information is generated and managed by nurses ... but nursing records are difficult to understand and use ... they are designed to answer administrative requirements ... (GP_LARG 1).

Another main issue is about "*the few possibilities to request additional information from the other provider*" (GP representative) due to a lack of direct interactions and sometimes, the absence of contact details. Nurses also reported the unavailability of GPs as a main barrier for communication and IPC in general. For example, with the statement: "*Obtaining information becomes sometimes relentless*" (RN_LARG 6).

Moreover, professionals are not always aware of what information other professionals may have, nor what is expected of themselves or others. For example, with the statement: "*There is a need to clarify what information is relevant and necessary for each of us*" (nurse representative). Nurses believe this reflects a limited understanding of the contribution of each profession, which will require solutions that include a fundamental knowledge of each other's roles and responsibilities.

Next, within *communication pathways*, few LARGs could agree on a mode of communication that is best suited to the various situations. However, the objective of these processes should be communication optimization (time, disturbances, etc.). Such examples of optimization include:

A note at a patient's home for the renewal of prescriptions, a sheet of parameters in the shared patient record at their home, planned meetings and regular consultations for complex care, telephone calls for emergencies, etc ... (GP_LARG 4).

In most LARGs, there is no clear or common procedure for communication and the quality is variable person to person. However, they all agreed that for complex or urgent cases,

synchronous communication, whether face to face or by telephone, remains the privileged pathway. Nurses, however, stressed the importance of establishing formal communication paths for emergencies, such as a dedicated phone line or through an online platform.

Furthermore, LARGs who shared a physical location reported more informal and direct interactions and regarded

this physical proximity as a lever for IPC. They particularly valued this proximity for what it offered in terms of reduction of pressure and tension when urgent issues arose.

Also, the type of nursing practice was thought to impact a nurse's autonomy in choosing a communication pathway. Typically, mono- or multidisciplinary practice groups that are attached to a healthcare insurance organization experience less

Table 2. SWOT analysis of IPC as assessed by the six LARGs.

Strengths	Weaknesses
<p>Relational domain</p> <p><u>Professional power</u></p> <p>Shared professional power and responsibilities between both professions</p> <p>Openness of GPs to the discussion and suggestions of nurses</p> <p>Possibility of solo nurses to take initiatives relevant to patient care</p> <p><u>Team composition</u></p> <p>Small teams</p> <p>Skills and competencies of RNs</p> <p>Previous positive experiences of IPC</p> <p>Motivation of team members for IPC</p> <p><u>Team roles</u></p> <p>Recognition of all skills, roles, and specificities of each profession</p> <p><u>Team processes</u></p> <p>Establishing an open and informal communication</p> <p>Use of a variety of communication tools: coordination records, notes, and meetings. (<i>Communication is discussed in detail below</i>)</p> <p>Sharing values and goals</p> <p>Sharing procedures and best practice recommendations</p> <p>Development of mutual knowledge, trust, and respect</p> <p>Processual domain</p> <p><u>Time and space</u></p> <p>Shared locations</p> <p>Time dedicated to interprofessional meetings</p> <p><u>Routines and rituals</u></p> <p>Knowledge of everyone's work "habits"</p> <p><u>Information technology</u></p> <p>Shared although mono-professional health record</p> <p>Communication tools: e-mails and mobile applications</p> <p><u>Urgency</u></p> <p>Setting up an alert system for rapid decision</p> <p><u>Complexity</u></p> <p>Specialization of RNs: wound care, patient education, care for diabetic patients, etc.)</p> <p><u>Task shifting</u> (<i>discussed in detail below</i>)</p> <p>Organizational domain</p> <p><u>Organizational support</u></p> <p>Provision of collaboration tools, i.e. shared planning software</p> <p>Availability of premises for formal and informal meetings</p> <p>Administrative assistance so more time can be dedicated to collaboration</p> <p>Opportunities</p> <p>Contextual domain</p> <p><u>Political will</u></p> <p>Mobilization of municipal authorities against the workforce shortage</p> <p>Support from the research team within this project (initiated by regional authorities)</p> <p><u>Territorial coverage</u></p> <p>Good knowledge of the territory covered</p> <p>Shared patient population enhances IPC</p> <p>Clear separation between territories inhibits competition</p>	<p>Relational domain</p> <p><u>Professional power</u></p> <p>Lack of GP's regard to RNs clinical judgment</p> <p><u>Hierarchy</u></p> <p>Implicit hierarchy between GPs and RNs impedes dialogue and co-construction</p> <p>Explicit hierarchy: inhibits initiatives</p> <p><u>Socialization</u></p> <p>Local conflicting situation within and between both professions</p> <p><u>Team composition</u></p> <p>Large teams: difficult coordination of tasks and emergence of subgroups</p> <p><u>Team roles</u></p> <p>Some GPs' lack of knowledge of the nurse's role and skills</p> <p><u>Team processes</u></p> <p>Lack of protocols and procedures</p> <p>Absence of systematic feedback on the patient's health status evolution</p> <p>Lack of confidence in the other's capacity to question and renew their own methods of work</p> <p>Non-sharing a common patients' list</p> <p>Difficulty GPs and RNs have identifying patients they do have in common</p> <p>Processual domain</p> <p><u>Time and space</u></p> <p>Lack of time dedicated for care coordination</p> <p>Absence of reimbursement of time dedicated to care coordination and interprofessional meetings</p> <p>Separate locations: few opportunities for face to face discussions</p> <p><u>Routines and rituals</u></p> <p>"Old" working habits of GPs that are not conducive to IPC</p> <p><u>Information technology</u></p> <p>Absence of a common multi-professional electronic patient health record</p> <p>Lack of interoperability between electronic health records of each profession</p> <p>Insufficient computer skills and training</p> <p>Organizational domain</p> <p><u>Organizational support</u></p> <p>Significant workload: difficulty to "lift one's head up from the track"</p> <p>Threats</p> <p>Contextual domain</p> <p><u>Political will</u></p> <p>Few integration policies and incentive measures to encourage IPC</p> <p>Lack of clarification of roles and task division between primary healthcare professionals</p> <p>Workforce shortages</p> <p>Absence of legislation and classification for "new" tasks (<i>task shifting is discussed in detail below</i>)</p> <p>Insufficient interprofessional education programs</p> <p><u>Economics</u></p> <p>Lack of reimbursement of activities dedicated to dialogue, coordination and IPC</p> <p>Absence of a nursing nomenclature for "new" activities</p> <p><u>Professional representation</u></p> <p>Absence of an order or union representing and advocating (eg. with policy makers) for the nursing profession</p> <p><u>Diversity</u></p> <p>Diversity of views and ways of functioning within teams</p> <p>Inequality of economic rewards and social status between professions</p>

Table 3. Priority improvement actions of the participating LARGs.

LARGs	Description of priority improvement actions
LARG 1	Creating a shared patient's record at the home of the patient Implementing regular coordination meetings Improving communication and mutual knowledge: initiating monthly formal and informal meetings
LARG 2	Promoting task sharing and delegation to better distribute the workload, starting with "technical" tasks, such as blood tests
LARG 3	Enhancing frailty screening and follow-up by a multidisciplinary team: implementing a multidisciplinary screening tool
LARG 4	Improving IPC and communication about patients at high risk of loss of autonomy: implementing regular nursing home visits and interprofessional meetings for debriefing
LARG 5	Clarifying professional roles and formalizing task delegation: establishing a timetable to improve diabetic patient follow-up with clear role descriptions for each profession
LARG 6	Enhancing use of electronic communication Improving delivery of preventive care: participating in continuing education sessions involving both doctors and nurses Promoting task delegation and payment of nursing activities that are not currently included in the nomenclature Focusing on well-being at work

flexibility in their ability to modify or adapt communication protocols to the context or the needs of GPs. This was perceived by participants as a barrier to IPC.

Finally, fee-for-service modes of payment, where no reimbursement of IPC activities is provided, was thought to impede communication, as expressed in the following statement: *"This [economic] situation results in the unwillingness to devote time to coordination"* (GP representative).

Nurses paid on fee-for-service asked for information sharing to be adequately recognized for its benefits. For example: *"Sharing information takes time, it improves the quality of care and therefore reduces the additional cost of complications. Information sharing must be measured and funded at fair value"* (RN representative).

The exchange of dialogue emerged as an underused though necessary communication path, especially regarding patients with complex needs. Participants agreed on the many barriers impeding these moments of direct exchange, namely lack of time, shared common spaces, funding, and the size of teams; large teams experienced more difficulty organizing joint meetings.

Information technology tools, such as EHR, currently used by participants are mainly mono-professional and lack interoperability (except for CHC) which impedes data sharing between the two professions; to date, GPs and nurses do not share a common patient medical record system. The regional platform for shared EHR was found to be used by GPs exclusively. An insufficient knowledge of how (and if) nurses could access this platform was noted among participants. Also, there was the discussion of how to create links between nurses' software and the platform, so they do not have to encode the information twice. Reported consequences of this current situation include miscommunication, the risk of redundancy between different places where information is stored, confusion, loss of information, and lack of updates.

Health and personal data security and protection emerged as main concerns for participants. They expressed mistrust toward the security and confidentiality of data shared on the regional electronic platform. Paradoxically, they reported using

unsecured means of communication, such as WhatsApp and private e-mails, that offer no guarantee of data security.

Patient representatives thought patients rarely participated in decision-making about which healthcare data to share and with whom. One representative stated the following about patients: *"They should be clearly asked: What would you accept that is shared? Should the sharing of certain information be extended to caregivers? Would you also like to receive the shared information?"* (patient representative).

Finally, experts from the regional platform for EHR that were present at the quarterly meeting provided detailed explanations to reassure participants about the confidentiality of data and clarified the possibilities offered by the platform in terms of information sharing between professions. They also proposed continuous support and counsel to the six LARGs for optimal use of the platform.

Task delegation.

Several challenges were identified which justified participant recognition of task delegation as a priority that should be addressed to improve IPC. On one hand, they stressed the need to use available human resources more efficiently and address the current shortages of health care workers. On the other hand, nurses' heavy workload and the limited financial recognition of their current activities were mentioned as main barriers to taking on additional tasks. One nurse describes her experience below: *"I mean it is already hard enough without adding time consuming and unpaid tasks to our daily work"* (RN_LARG 2).

The nursing nomenclature seemed restrictive, leaving no room for nurses to engage in new activities. Moreover, RNs paid on fee-for-service are minimally reimbursed for many essential daily activities they perform, such as health education and promotion, medication management, and monitoring patient parameters. However, less complex tasks (such as bathing) are included in the nomenclature and therefore reimbursed by health insurance.

Consequently, we observe a shift in *both* professional fields toward a less efficient use of human resources, where nurses perform less intellectual or innovative activities and GPs perform nursing activities. Indeed, in some urban areas, GPs would rather take on these nursing tasks and were reluctant to delegate what could have been easily performed by nurses i.e. blood withdrawal, wound care, suture removal. This GP reluctance is due to the intention to preserve payments for such activities for themselves. Furthermore, GPs expressed the desire to maintain their 'habits' and technical skills and feared losing the trust established with their patients. A final factor stated by GPs was their lack of trust in nurse competencies and a lack of knowledge of the nursing profession.

In parallel, GPs in rural areas expressed an interest in developing task delegation strategies for their practices. Furthermore, rural LARGs were more proactive in proposing and implementing concrete action plans to give GPs the time and ability to focus on tasks that best fit their competencies.

Practices that encouraged and facilitated task delegation were those who offered less financial pressure and complex administrative workloads, more opportunities for continuing education, specialization and acquisition of new skills, and

easier interactions (time and space) between professionals. Typically, group practices met these criteria, especially those who were paid on the capitation system. One nurse from a group practice stated the following: “*We have been doing things this way for a long time now, but within an informal framework, this [project] would help us in formalizing who is supposed to do what*” (RN_LARG 5).

Finally, there was a consensus that nurses need to be highly trained and benefit from continuing education if they are to perform advanced tasks. Participants also agreed that the current legislation regulating nurse activities needs to be revised to provide a securing framework for their expanded role.

Discussion

A major defining feature and strength of our action research was its co-construction nature. Our observations confirm that PAR could be a promising method in supporting the implementation of changes in collaborative practices. Indeed, a bottom-up approach like ours call upon the recipients’ motivation and contribution, at both an individual and collective level, in supporting change (Harvey & Kitson, 2016). Moreover, within a primary care context, collaborative approaches from the bottom-up have traditionally been delivered by professionally-owned, small-scale medical practices which could be more effective at implementing change (Valentijn et al., 2015). Furthermore, we observed a sustainability of improvement efforts as many LARGs continued to collaborate and share experiences, beyond the official timeframe of the research. This sustainability could also be due to the fact that PAR has the main strength of “*shifting the power and placing the practitioners as the experts of their experiences rather than privileging the role of the academic in theorizing what they observe*” (Stuart, 2014).

Also, our PAR illustrated how IPC is shaped by the setting in which it is embedded. Despite the relatively small number of participants, our purposive sampling allowed the investigation of diverse settings and configurations of practices within the primary care level. Studies have generally focused on a single context and not examined how team processes differ across contexts (DiazGranados et al., 2018). Reeves et al. (2010) framework was a valuable resource that helped us establish a comprehensive and structured diagnosis of the current IPC. Another strength of the framework is that it allows for a ‘mirror imaging’ of factors that facilitate or inhibit IPC. Through this, we were able to reinforce the differences in experiences across the diverse practice configurations. To our knowledge, few studies have used the Reeves framework in a primary care setting (Bentley et al., 2018).

Summary of findings

Our research brings to light the mutual lack of knowledge between colleagues and how each functions professionally, and their personal constraints and needs. Some GPs also showed a lack of regard toward RNs’ clinical judgment and a lack of confidence in their capacity and skills. Trust is, in fact, known to be related to the awareness of the other’s role in patient care (Bradley et al., 2012) and to the image of the

profession (Mior et al., 2010), but also to knowing each other (D’Amour et al., 2008). In our study, both interpersonal and interprofessional acquaintanceship between participants were lacking, yet are essential to building a collaborative practice. This gap could be explained by three factors: 1) the mono-professional initial and continuous education of both GPs and RNs since interprofessional education programs are developing slowly in Belgium without clear support or funding from universities or the government; 2) the predominance of mono-professional practices; and 3) the lack of time, space and funding that impedes the organization of strategies for creating exchanges in dialogue between colleagues.

This need for a better mutual acquaintanceship was reflected in the LARGs’ choice of priority actions. LARGs who least “knew” each other chose primarily to establish regular meetings and improve their communication. In a recent systematic review, Schot et al. (2020) show that professionals actively contribute to IPC by bridging professional and social gaps; and doing so requires active work to get familiar with other’s professional backgrounds, competencies, and values and norms. It also requires frequent interactions, informal talks and social get-togethers to improve personal relations (Schot et al., 2020).

However, and beyond the professionals’ efforts, improving IPC and teamwork needs a “*team-friendly healthcare system*” with integrated care arrangements that focus on local communities (Van Dijk-de Vries et al., 2017). In Wallonia, these arrangements would need to primarily include the promotion of multi-professional group practices for a common population. Our research highlights the benefits of such practice configurations in terms of physical proximity of professionals that facilitates task delegation, and in terms of shared responsibilities and tools for a population. Other studies also report on the importance of the physical premises for IPC, where having separate bases or buildings can result in team members being less integrated, which may limit team functioning and effectiveness (Chung et al., 2012; Karam et al., 2018; Xyrichis & Lowton, 2008). As for funding, participants paid on capitation reported allowing themselves more time for meetings and coordination activities. However, this payment system is still marginal in Belgium whereas the FFS system remains predominant. Moreover, FFS is recognized as a major barrier for collaboration and integration (Gilles et al., 2020; Tsiachristas, 2016).

Central to IPC, communication was identified by professionals as a common priority. This finding is consistent with previous extensive literature on the crucial role of communication in fostering relationships, balancing power, sharing values, and enhancing trust, but also in role clarification and negotiation (Karam et al., 2018). Constant and frequent informal communication was also shown to be critical in achieving and sustaining effective IPC (Morgan et al., 2015). Specific to our context, though, is that participants showed a lack of knowledge about existing resources that could be mobilized to improve their functional integration and general collaboration. For instance, they underused the Regional Network for shared EHR because they were unaware of its possibilities and lacked confidence in its security. Also, the priority

improvement actions proposed by the LARGs showed that small, local initiatives could be undertaken in order to improve communication.

Finally, the issue of task delegation is tightly related to the payment system as some GPs reported a reluctance to delegate remunerated services, while some nurses were reluctant to receive new non-reimbursable activities. Other studies have highlighted task delegation as a perceived threat to physician jobs and financial security (Maier & Aiken, 2016; Niezen & Mathijssen, 2014). However, financial issues were not the only barrier to task delegation in our context or in the literature. Niezen and Mathijssen (2014) illustrate the complexity of task reallocation by identifying four themes that facilitate or hinder delegation. They are 1) knowledge and capabilities, 2) professional boundaries, 3) organizational environment, and 4) institutional environment (Niezen & Mathijssen, 2014). Consistent with these themes, our results show a lack of preparedness among RNs in terms of training and qualification, and among GPs in terms of setting new professional boundaries. Our results also highlight a lack of planning at the organizational and institutional levels reflected in the scarcity of multi-professional practices, and the absence of a classification and supervision for new tasks and legal framework to regulate the new nursing role.

Based on these findings and on our participants' suggestions, we developed a brief list of recommendations for medium and long-term actions that could improve IPC in the primary care context. On the professional level, those include: 1) seeking information and participating in existing trainings on shared medical records; 2) organizing and participating in formal and informal meetings between GPs and RNs; and 3) establishing local procedures and protocols, for referrals, for the choice and use of communication paths, and for task delegation within the current legal framework. On an organizational and institutional level, IPC could be improved through 1) promoting regular mutual exchanges between GPs and nurses by providing meeting space and funding; 2) promoting the use of the existing platform for shared medical records by both professions and facilitating its interoperability with other software; 3) encouraging the implementation of multidisciplinary group practices with a capitation payment system for a shared population; 4) developing interprofessional education in the work place and in academic curricula; 5) offering a legal framework for task delegation; and 6) developing an ad-hoc training for nurses.

Limitations

Ideally, this PAR should have included a bigger number of participants and lasted longer to better implement the proposed changes and to conduct an evaluation of their outcomes. However, due to the limited funding, we were constrained to limit our recruitment to six LARGs and our support to 15 months. Also, the PAR did not include patients, however, we included a patient representative in the steering committee of this project.

Conclusion

Benefits of IPC between GPs and RNs in primary care are widely agreed upon for patients, professionals, and healthcare systems in general. However, implementation of collaborative interventions still faces many challenges. Establishing effective communication and proper task delegation are thought to be part of the solution. While communication could be supported locally with small initiatives, task delegation requires considerable efforts on the professional, organizational, and institutional levels. Despite these challenges, many countries with health care systems similar to Belgium have succeeded in implementing a model of task delegation that promotes IPC between GPs and nurses in primary care, resulting in effective and efficient care delivery. Addressing the workforce shortage and sociodemographic challenges of the Belgian primary healthcare system will require learning from the experiences of others and establishing IPC as a priority on the political agenda.

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Declaration of interest statement

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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