Leading value-based health care: the role of leadership in integrated practice units

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Background: An important aspect of value-based health care is providing care in an integrated practice unit (IPU). In an IPU, the full cycle of care for a specific medical condition is delivered through collaboration among professionals with diverse functional backgrounds. Although the proposed functioning of an IPU in the literature on value-based health care is based on assumptions about leadership, the role of leadership in the context of IPUs is overlooked in empirical studies.

Purpose: Drawing on previous studies on shared leadership in other organizational contexts, this paper explores the role of formal leadership in the emergence of shared leadership in IPUs.

Methodology/Approach: To this end, we carried out a qualitative study in four IPUs in the Netherlands with differing formal leadership structures.

Results/Conclusion: We found that, in an IPU, leadership is mainly exhibited by those in formal leadership positions. It also appeared that having one versus multiple formal leaders can influence the opportunities for other IPU members to demonstrate leadership and the extent to which IPU members feel the need to exercise leadership in IPUs.

Practice Implications: We encourage staff managers and IPU members to define clear roles for leaders and establish a structured strategy for sharing information and resources, such as communication channels and regular feedback loops.

Key words: Formal leadership, integrated practice unit, shared leadership, teamwork, value-based health care

One of the strategies that is widely embraced as a solution to rising health care costs, the uncertain quality of care, and a lack of coordination between health care domains involves a shift from volume-based to value-based health care (VBHC; Porter & Teisberg, 2006). An essential element of VBHC is the delivery of care within an integrated practice unit (IPU; Porter & Lee, 2021; Porter & Teisberg, 2006). In an IPU, the full cycle of care for a specific medical condition is provided by a team of professionals with diverse functional backgrounds. According to the literature on VBHC, IPU members collaborate and function as a comprehensive team, sharing a common purpose and taking collective responsibility for their patients' treatment (Porter & Lee, 2021). Additionally, Porter and Lee (2021) argue for leadership in the IPU that promotes professional integration and prioritizes patient value.

Through the reorganization of care into IPUs, the traditional lines of authority, typically centered around heads of medical specialties, are disrupted (Lee & Porter, 2013). Therefore, new forms of leadership are needed that foster the organization of care around a condition rather than a medical specialty. Although proponents of VBHC emphasize the importance of leadership for IPUs to be effective (Porter & Lee, 2021; Porter & Teisberg, 2006), they do not elaborate on how this is to be achieved, nor has the role of IPU leadership received scholarly attention.

VBHC assumes that all IPU members are involved in decision-making and are collectively responsible for a patient's treatment (Lee & Porter, 2013; Porter & Lee, 2021). This suggests an environment in which leadership is divided among all IPU members. Such shared leadership, in which employees lead each other in achieving team objectives, is suitable for a team-based context where one leader may lack the necessary expertise or resources to oversee all aspects of the team's processes (Nicolaides et al., 2014; Wang et al., 2014). Indeed, previous research on teamwork has shown that sharing leadership tasks can enhance team effectiveness and performance and improve information exchange among employees (Carson et al., 2007; D'Innocenzo et al., 2016; Pearce, 2004). On this basis, we argue that shared leadership fits the IPU context well because it facilitates joint delivery of value to the patient.

As hospitals in the Netherlands become more condition-oriented, IPUs are given more responsibility for the achievement

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of high-quality care. Moreover, on a global scale, health care delivery is increasingly being organized around health conditions in IPUs (Wiersema et al., 2023). Currently, responsibility is centralized in either one medical leader or a leadership team comprising diverse professionals. Within the collaborative context of an IPU, where we would expect all IPU members to participate in leadership, questions arise as to the role of such formal leadership structures—with either a single or multiple formal leaders—in the emergence of shared leadership. Previous research has revealed that formal leadership can influence not only the overall interactions between team members but also the interactions between those with and without formal leadership positions (Chreim et al., 2013). Furthermore, formal leaders can facilitate the emergence of shared leadership by creating stability and clear coordination (Pearce, 2004). Conversely, they might also impede the emergence of shared leadership by dominating the decision-making process or creating strong hierarchical divisions (Denis et al., 2012; Ziegert & Dust, 2021).

To summarize, we argue that shared leadership fits the IPU context, that different formal leadership structures exist within IPUs, and that formal leaders can facilitate or hinder the emergence of shared leadership. To understand the relationship between shared and formal leadership in an IPU, we aim to explore who exhibits leadership behavior, and whether this is shared among IPU members, and to examine how formal leadership structures support or hinder the development of shared leadership. This is reflected in the following research question: "What is the role of formal leadership in the emergence of shared leadership in IPUs?"

Answering this question will contribute to two streams of literature. First, by connecting insights from the literature on shared leadership to IPU practice, this paper unpacks and substantiates an assumption underlying VBHC: Leadership promotes professional integration and prioritizes patient value. In doing so, we aim to contribute to the study of the implementation of VBHC. Furthermore, because shared leadership is argued as appropriate for an IPU, even though formal leadership may influence the environment in which team members work (Ziegert & Dust, 2021), it is relevant to unravel how formal leadership may contribute to the emergence of shared leadership in IPUs. Second, we contribute to the management literature by focusing on the relationship between two concepts: formal and shared leadership. Because formal leadership has been shown to facilitate or hinder the emergence of shared leadership in contexts outside health care (Chiu et al., 2016; Hoch, 2013; Pearce, 2004), it is relevant to explore how this plays out in the case of IPUs and to investigate the underlying mechanisms.

Theory

IPUs

In this Theory section, we draw on theoretical insights from VBHC, team, and leadership literature to formulate explorative expectations regarding the relationship between shared and formal leadership in the IPU.

The condition-centered focus in IPUs is seen as critical to enhancing patient value (Porter & Lee, 2021; Porter & Teisberg, 2006). IPUs are composed of clinical and nonclinical care professionals who provide the full cycle of care for specific medical conditions. As such, IPUs are organized around the needs of a patient and the patient's condition, rather than around a medical specialty (Porter & Lee, 2021). For example, a colorectal cancer IPU would include professionals such as surgeons, radiotherapists, medical oncologists, nurses, and secretaries who would collaborate over several years and cover all aspects of a patient's treatment. Based on performance information, the IPU members can decide on objectives, develop an improvement structure, and improve the quality of care for their patient group. The literature on VBHC states that all IPU members are expected to have a shared purpose (achieving the best value for the patient), develop solid relationships with the other IPU members, and take shared responsibility for the patient group. Also, decision-making power, regarding either a patient's individual treatment or improvements in the care delivered to the patient group, should be distributed among the team members based on their profession-specific knowledge (Porter & Lee, 2021; Porter & Teisberg, 2006).

Shared Leadership

IPUs exhibit many characteristics of an interprofessional team in which team members collaborate to complete a project or task (Sundstrom et al., 1990). In general, leadership in teams is defined as "the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives" (Yukl & Becker, 2006).

Traditionally, leadership within teams has been characterized by a hierarchical structure in which leadership emanates from a single formal leader (Antonakis & House, 2014). However, within the teamwork literature, the focus has more recently shifted to horizontal forms of leadership, where leadership is perceived as a mutually influencing process among team members, such as is seen in shared leadership (Carson et al., 2007; Morgeson et al., 2010; Nicolaides et al., 2014; Pearce, 2004). We consider shared leadership to be an emergent team phenomenon whereby leadership responsibilities are broadly distributed and coordinated among team members (Carson et al., 2007; Pearce, 2004). Sharing leadership may be beneficial in complex and uncertain team contexts, where a single leader may not have all the resources necessary to lead the team toward achieving team goals (Pearce & Manz, 2005). For instance, IPUs in pursuing VBHC require all professionals representing their discipline within the IPU to share their profession-specific knowledge for improving health care. Under such circumstances, it is quite likely that no IPU member will have the combined expertise necessary to effectively lead or supervise all the work processes.

Even though shared leadership is a collaborative effort, it should be understood as distinct from collaboration among team members (Carson et al., 2007). As the above definition of shared leadership indicates, this should be seen as both the distribution and coordination of leadership behaviors in a team. In contrast, collaboration encompasses all types of behaviors team members engage in when they work together.

As such, shared leadership entails more than just mere collaboration, because it involves multiple team members not only working together but also actively distributing or coordinating leadership behaviors.

The Interrelationship Between Formal Leadership Structures and Shared Leadership

In health care, formal leadership has long been characterized as a vertical structure: A hierarchically appointed leader, most often a senior medical specialist, influences the other professionals involved in patient treatment (De Brún et al., 2019; Kumar, 2013; Pearce, 2004). However, the demand for cross-disciplinary care delivery has led to proposals for alternative formal leadership structures. Ones in which a dyad or a collective are given the responsibility for jointly fulfilling the leadership role have been endorsed in the literature for a team-based context (Carstensen et al., 2023; De Brún et al., 2019; Denis et al., 2012; Günzel-Jensen et al., 2018; Klinga et al., 2016; Morgeson et al., 2010; Steinert et al., 2006).

Further, there is a lack of consensus on the relationship between formal leadership, where leadership is allocated to certain individuals, and shared leadership, where team members with and without formal leadership positions engage in leadership (Denis et al., 2012; Holm & Fairhurst, 2018). Previous research has argued that shared leadership depends in part on the formal leaders creating the possibility for team members to engage in leadership (Hoch, 2013) and, at the same time, on team members being willing to accept this opportunity (Chiu et al., 2016). Formal leaders can support, encourage, and maintain shared leadership by creating a climate of trust, stability, and clear coordination or by slightly stepping back from the decision-making process (Pearce, 2004). Such a team environment, with a shared purpose, social support, and an appreciation of contributions, is seen as necessary to stimulate all team members to engage in leadership (Carson et al., 2007; Denis et al., 2012; DeRue & Ashford, 2010; Halevy et al., 2011; Zhu et al., 2018).

Apart from formal leadership in general, the formal leadership structure, whether leadership is allocated to an individual or to a leadership team, is suggested to have an influence on shared leadership. A structure with one formal leader can encourage the emergence of shared leadership by creating room for others to engage in leadership (Ensley et al., 2006). Conversely, a formal leadership team consisting of individuals with different functions and resources can create the integrated team environment that facilitates shared leadership (Gibeau et al., 2016; Richter et al., 2006). However, recent literature has been critical of this optimistic view of the facilitating role of formal leadership structures (Chreim et al., 2013; Gronn, 2009). For instance, single formal leaders who seemingly encourage participation and shared leadership may, at the same time, dominate the decision-making and collaborative processes, thereby impeding others in engaging in leadership (Holm & Fairhurst, 2018). Furthermore, having a formal leadership team with multiple individuals exerting their influences can reduce the incentive for other team members to exhibit leadership (Gronn, 2009). Also, leadership that is formalized in multiple individuals runs the risk of creating a stronger distinction in the team between those individuals with a formal leadership position and those without (Richter et al., 2006; Ziegert & Dust, 2021). This disparity might lead to a reduction in leader–member exchange, which would be unfortunate given that such exchange is necessary for team members to engage in leadership (Zhang et al., 2012).

In sum, building upon the literature on teamwork and shared leadership, we formulate two key expectations: (a) Leadership behavior in IPUs is shared among all of its members, and (b) formal leadership in the IPU, in different structures, may encourage shared leadership but, at the same time, might hinder it. Consequently, this study explores in more detail the interrelationship between formal leadership and shared leadership in IPUs.

Method

With the aim of identifying and understanding patterns in how formal leadership structures influence shared leadership in IPUs, this study adopts a pragmatic qualitative approach, using data collected through semistructured interviews (Yin, 2015).

This research was conducted using a sample of IPU members from four IPUs (kidney failure, sleep disorder, vulnerable elderly, and maternity care), two IPUs taken from each of two nonacademic teaching hospitals in the Netherlands. Both hospitals had made the strategic choice to organize their care based on VBHC principles, in the form of IPUs.[1] To be able to explore the relationship between formal leadership structures and shared leadership, the IPUs for this study were purposely selected based on their formal leadership structures: Two IPUs (one from each hospital) had a formal leadership structure with a single leader, and two had a leadership team (three leaders: medical, nurse, and project manager). In the start-up phase of the IPUs, employees collaborated as a team without a designated leader. As the IPUs further evolved, hospital management evaluated the most suitable leadership structure and designated several team members as formal leaders.

The four IPUs in this study are composed of professionals representing the primary specialties involved in the care of the specific patient group. The IPU relates to a specific condition of the patient (e.g., breast cancer). Each IPU is composed of at least a medical specialist, a project manager, a nurse, and a quality or operational manager. For most interviewed participants, working within the IPU to improve patient value for a specific medical condition comprises only a part of one's job. Table 1 provides an overview of the study's participants including their function and the leadership structure within their IPU.

Data Collection

Data were collected through 17 semistructured interviews with IPU members with and without leadership positions. The interviews started with an opening question through which participants could elaborate on their perspective on working in an IPU. This question was followed by asking participants to describe the division of roles in their IPU and

[1]The IPUs in this study are similar to the IPUs described in the VBHC theory, apart from not having financial accountability.

TABLE 1: Participant characteristics

Function	Formal leadership structure in IPU	
	Single leader (n = 7)	Leadership team (n = 10)
Medical specialist	2	1
Project manager	-	1
Nurse/physician assistant	2	4
Allied health professional	-	2
Manager (quality/ operational)	3	2
IPU members with leadership position	2	3
IPU members without leadership position	5	7

who they considered to be a leader of the IPU. The remainder of each interview concerned issues related to experiences with working in the IPU, such as collaborative IPU meetings, decision-making processes regarding patients' treatment, and day-to-day practices in delivering care to the patient in collaboration with other IPU members. These IPU issues were thoroughly explored by asking participants to describe how IPU members were involved in these situations, what each did, and how they personally experienced this. Questions were, for example: "Can you describe how decisions are made in your IPU?" or "Can you describe a situation in which you took on someone else's responsibility?" Given that the concept of leadership can be interpretative and context-specific, our approach involved encouraging storytelling about IPU practices rather than explicitly asking interviewees about their leadership behavior. This approach allows participants to provide detailed, in-depth information about their experiences and beliefs and enables researchers to distill different leadership behaviors and to identify the role of formal leadership structures in shared leadership.

Analysis

The interviews each lasted between 30 and 55 minutes and were audiotaped and transcribed. The first author (D. J. v. S.) conducted a deductive thematic analysis grounded in the literature on teamwork and shared leadership, as outlined in the Theory section. This analysis followed the steps proposed by Braun and Clarke (2006). First, the data were read thoroughly to become familiar with the text. Second, codes were generated to investigate the formal leadership structures, leadership behaviors, and the relationship between formal leadership and shared leadership in the IPUs. Characteristics of the formal leadership structures, such as who was considered a formal leader and whether roles were explicitly divided, were coded.

The extent to which leadership was shared was measured with the use Yukl's (2012) taxonomy of leadership behaviors, which involves *task-oriented*, *relations-oriented*, *change-oriented*, and *external oriented behaviors*. *Task-oriented behaviors* involve clarifying and planning tasks, problem solving, and monitoring operations. *Relations-oriented behaviors* include showing concern for needs and feelings, developing skills, recognizing achievements, and empowering followers. *Change-oriented behaviors* include encouraging innovation, advocating and envisioning change, and facilitating collective learning. Finally, *external oriented leadership behaviors* concern networking, external monitoring, and representing the team. By coding these leadership behaviors in the transcripts, we were able to identify who engaged in which leadership behavior. Using the definitions provided by teamwork and shared leadership literature, a distinction was made between behaviors that can be classified as shared leadership or as collaboration. Additionally, the transcripts were searched for patterns that point toward a relationship between formal leadership and shared leadership within the IPU. Here, we focused on text segments concerning who engages in what leadership behaviors and analyzed why such engagement took place. This also allowed us to investigate under what circumstances IPU members without formal leadership position engaged in leadership and, thus, when leadership was shared among IPU members.

Based on this coding process, themes were created that explained a relationship between formal and shared leadership in IPUs. The identified themes were discussed among the first author and two other authors (P. E. A. v. d. B. and S. M. G.), leading to the identification of the patterns described in the findings section.

Three months after the interviews, the results were discussed with participants to check the credibility of our interpretations. All four IPUs were given the opportunity to engage in member checking, but due to scheduling issues, only two IPUs participated. This form of member checking (Creswell & Miller, 2000) was carried out at the group level in two IPUs, one from each hospital (one with a single leader [SL] and one with a leadership team [LL]). The involved participants indicated that the themes and storylines we presented aligned with their experiences in their IPU.

Results

In this section, we first describe the formal leadership structures in the IPUs and their characteristics. We then elaborate on the leadership behaviors that were observed in the IPUs and who exhibited these behaviors. The final subsection focuses on how formal leadership structures support or hinder the emergence of shared leadership in the IPU.

Formal Leadership Structures in the IPU

We found that the composition of the four IPUs was similar and generally consisted of medical specialists, nurses, allied health professionals (such as dieticians or social workers), a quality manager, and a project manager (an employee from a supporting department who had been assigned by the organization to manage IPU implementation). As the reorganization into an IPU structure was still ongoing in both hospitals,

these project managers had an active role. In each IPU, all its members were involved based on their professional background and expected to act accordingly. For example, respondents indicated that the nurse involved should represent other nurses in IPU meetings, and project managers should prepare and schedule meetings.

> *You can think along, brainstorm together, but you also have to keep a close eye on your own role and position in the team. (Quality manager, SL)*

Two of the IPUs had a single formal leader: in both cases, a medical specialist belonging to the main profession treating patients in that IPU. For instance, the formal leader of the maternity care IPU was an obstetrician. The formal leader was seen as being ultimately responsible for patient care and progress with the IPU improvements. IPU meetings involving the entire IPU took place every 4–6 weeks depending on the topics to be discussed. The respondents indicated that, under most circumstances, the formal leader acted on an equal footing with the other IPU members and, only if necessary, took the ultimate decisions and had the final say in discussions.

> *The leader is really the medical leader, but who also takes on that role and organizes new plans or ideas. We brainstorm together, but in the end she decides. (Nurse, SL)*

> *Ultimately, I have the final responsibility for all the IPU's activities, or at least that is how I feel it. (Medical specialist, SL)*

Both the IPUs with a leadership team had three members with formal leadership positions. In both cases, these were a medical specialist, a nurse, and a project manager who had been allocated joint responsibility for ensuring the IPU's progress and leading improvement projects. The medical leaders both belonged to the main profession in their IPU and were considered responsible for the overall treatment of the patients. The nurse leader provided the leadership team with operational input from a nursing perspective. The respondents saw the project manager as a key figure in the leadership team and responsible for leading the IPU implementation at the organizational level, that is, preparing and planning IPU meetings as well as emphasizing the purpose of working in the IPU. To discuss the progress of the IPU, the leadership teams met regularly, often at least twice a week. IPU meetings with the entire IPU take place on a less regular basis, depending on the topics to be discussed.

> *Well, making decisions, that is often really up to the leadership team, to make certain key decisions. So, the project manager leads the project, and the nurse leader has her operational input. (Medical leader, LL)*

> *Well, our project manager is wonderful in keeping track of what happens and what needs to happen. Our nurse leader is much more practical and looks at the implementation from that specific perspective. (Medical leader, LL)*

Leadership Behaviors in the IPU

Guided by Yukl's (2012) taxonomy of leadership behaviors, we now describe the leadership behaviors that were observed in the IPUs, who exhibits these behaviors, and whether these behaviors are shared among IPU members.

Task-oriented leadership behavior concerns operational actions to reach team goals. The interviews revealed that, in the IPUs, this behavior concerned allocating responsibilities for IPU improvement projects and preparing and scheduling IPU meetings. It also included keeping track of IPU-related progress and explaining the next steps in improving IPU practice. Most *task-oriented behaviors* were enacted by the project managers and the medical and nurse leaders. In one instance, a quality manager (not a formal leader) exhibited such behavior in explaining part of the development or improvement plans. As a general observation, project managers engaged in task-oriented leadership behaviors inherent to their role, irrespective of the specific leadership structure within the IPU. For instance, in IPUs with a single formal leader, in addition to this leader, the project manager also assumed responsibility for task allocation among IPU members.

> *The project manager is very important. She ensures that there is a meeting structure and that we can prepare the meetings based on the PowerPoint she sends us. (Medical specialist, LL)*

> *They [the leadership team] talk about how we are going to collect data, or what the focus of the IPU improvements will be. They define the process, explain where we will be going and why. (Nurse, LL)*

Relations-oriented leadership behavior aims to maintain and improve interpersonal relationships. Participants indicated that, in their IPU, this behavior is related to ensuring that every IPU member can participate in discussions. For example, this includes actively engaging with all IPU members and making sure they are involved in IPU meetings. The data suggest that these behaviors are only demonstrated by IPU members in formal leadership positions.

> *If I see that, for example, certain nurses just don't respond or are absent at meetings, I'll ask them: Why are you not there, what is wrong? It is not like we meet every week, we meet only once a month. (Medical specialist, SL)*

Change-oriented behavior is defined as encouraging and visualizing innovations. We observed such behavior in the IPUs aimed at raising awareness of the need to improve IPU practice. Raising this awareness is sometimes supported by discussing patient-reported experience measures (PREMs). Furthermore, this behavior also includes being ambitious about improvement ideas and inspiring and activating other IPU members to engage in improvement projects. Influencing others through such change-oriented leadership behavior was primarily done by IPU members with formal leadership positions. However, we did identify a nurse without a formal leadership position who did engage in *change-oriented behavior* by inspiring and activating others to participate in an improvement plan.

I think it works to bring an interesting subject to the table and to bring it with some certainty. Then becoming enthusiastic about it. And then, asking the others: what do you think about it, do you like this, how are we going to apply this, does it seem like something you would do? (Medical specialist, SL)

So, I'm asking for input from, say, the ENT doctor in this case. I'll ask: how do you envision delivering this to that patient as a PREM? So, she came up with an idea, I then made a good PREM that is clear and measurable. And then I implemented it, told the ENT assistants what to do, told the ENT doctors what to do, and explained how it is implemented and where it should be collected. (Nurse, SL)

External oriented leadership behavior covers actions related to collecting external knowledge, representing the team, and building networks outside the team to achieve a team's goals. The data reveal that all IPU members, regardless of their leadership position or function, engage in *external leadership behavior*. The IPU members indicated that such behavior included gathering knowledge, resources, and opinions from colleagues in their own professional group who did not participate in IPU meetings. For example, IPU members discuss plans formulated during IPU meetings with colleagues outside the IPU to determine whether proposed IPU plans align with current practice or require adjustments. Subsequently, IPU members summarize and convey their colleagues' feedback in IPU meetings to refine the plans accordingly. Respondents characterized their role during IPU meetings as being an ambassador for their profession, meaning that they tried to influence the other IPU members based on the perspective of their professional group. One of the nurses (not a leader) explained that, prior to an IPU meeting, the representative IPU members first seek to discuss all aspects of the IPU plans with colleagues from their professional group and obtain their approval, before agreeing on a plan in the IPU meeting.

Within our own team of dietitians, we discussed whether we were all okay with the change. And then it is my duty to, in the IPU, say that we're going to do it like this. (Allied health professional, LL)

I guess that's kind of my role in the IPU: to provide context and input on our specialty and how we work, and then translate the IPU's ideas back to my fellow specialists. (Medical specialist, LL)

The Role of Formal Leadership Structures in the Emergence of Shared Leadership in the IPU

In this subsection, we outline how formal leadership structures might facilitate or hinder the emergence of shared leadership in an IPU. The interviews revealed the role of formal leadership structures in influencing both the opportunities and felt need to engage in leadership.

Opportunities to engage in leadership. Compared to those IPUs with a single formal leader, in the IPUs with leadership teams, there appeared to be a stronger division between those IPU members with and those without formal leadership positions. For instance, separate meetings would be planned for the leadership team and for the entire IPU. By having these separate meetings, IPU members saw the formal leaders as having a so-called head start regarding IPU knowledge and information because much of the decision-making and knowledge exchange occurred in these separate meetings.

And so, we tried to do some pilots to shorten the waiting times. And also to test the new device. We discussed this in a small consultation, the leaders and I, what is something we can tackle and what can we measure? Well, then we're doing a pilot. We have made a small PREM on that so as to be able to measure whether it makes sense what you do. Based on the result of that, we will then discuss this in a major meeting with all the IPU's involved professionals, and it will be discussed whether we continue with it or not. (Nurse, LL)

When we meet with the entire IPU team, we act more as leaders who give them a summary of what is going on. (Nurse, LL)

In these team leader meetings, those in leadership positions have already had time to discuss a particular matter with each other or to delve into it. Moreover, the leadership team has greater access to resources and can decide whether or not a subject, such as finances or PREMs, will be on the agenda of meetings involving the entire IPU. In this way, leadership teams are viewed as a subgroup within which the information and leadership resources of the IPU reside. Although this creates an opportunity for formal leaders to exhibit leadership, it hinders other IPU members accessing these resources and, subsequently, engaging in leadership.

I think it's good that a lot of things are not discussed in the entire IPU, but only among them [leadership team]. They've been given time to work on it, I haven't. (Allied health professional, LL)

For me, it is not always completely clear what information exists, what information we could compare. I actually assume that they [the leadership team] choose what is relevant or what information matters for our team. (Nurse, LL)

In contrast to IPUs with a leadership team, those with a single formal leader conducted more IPU-related discussions in meetings with all IPU members. For instance, members of these IPUs mentioned that, during these meetings, professionals would collectively discuss the IPU's progress in terms of the quality of care being delivered to the patients. This approach empowered all the IPU members with IPU knowledge and resources, providing them the opportunity to participate in leadership.

Officially, I do not always have the medical expertise to engage in IPU discussions, but in our team and in the IPU meetings, we can all express our personal ideas and discuss them. Sometimes, others will say: it is clear that your idea is not suitable. But then we can explain to each other why that is the case and continue considering new plans for the IPU. (Quality manager, SL)

The felt need to engage in leadership. From the respondent' narratives, it appeared that the formal leadership structure influences the extent to which they feel the need to engage in leadership. In IPUs with a leadership team, IPU members tended to see monitoring the progress of the IPU (*task-oriented behavior*), proposing and explaining changes (*change-oriented behavior*), and scheduling IPU meetings (*task-oriented behavior*) as all being the responsibility of the formal leaders. They also considered the members of the leadership team as being responsible for analyzing patient-reported outcome measures and making decisions about improvement plans. Further, IPU members without a leadership position did not feel a need to take the initiative in, for example, proposing new improvement ideas (*change-oriented behavior*). It seems that, because the division of roles is viewed as explicit, IPU members with formal leadership positions engage in leadership behaviors and those without seem to position themselves as a passive audience. The latter view their role as primarily providing feedback on plans proposed by the formal leaders.

> *Well, if they [leadership team] do not update us frequently, the practices of this team feel less important to me. You are less concerned with it, if you do not feel involved. Now, I'm actually constantly awaiting their decisions. (Allied health professional, LL)*

> *My role in the IPU is to participate, and based on what they [the leadership team] determine from the data, and whether it concerns my profession, I may get involved in one of the improvement projects. (Nurse, LL)*

> *My role in the IPU is to participate, and based on what they [the leadership team] determine from the data, and whether it concerns my profession, I may get involved in one of the improvement projects. (Nurse, LL)*

Contrary to those with a leadership team, members of IPUs with a single formal leader seem to have a stronger felt need to engage in leadership behaviors. In IPUs with one formal leader, the other members are aware that this single leader cannot possibly have all the required knowledge and expertise needed to accomplish the team's goals. By realizing that their specific expertise is needed to accomplish team goals, IPU members without a leadership position are more inclined to engage in leadership behavior. As an illustration, an active and motivated nurse, even though she was not in a leadership position, considered it as her task to collect input on how the use of PREMs could be implemented in her department and, subsequently, to lead the implementation. She explained that she did this because the formal IPU leader was not as close to the nurses as she was.

> *The medical lead is powerful but very democratic. She only uses her powers in the event of a deadlock. Most of the decision-making really just comes about through coordination across disciplines. […] Discussions are often well-conducted and to the point, so the medical lead is not really needed to come to a final decision. (Quality manager, SL)*

> *I think there isn't really a leader in our case. Yes, there is someone who organizes and prepares the meetings, but we do it together as a team and make it possible together. (Quality manager, SL)*

> *You have to do it differently within such an IPU. You have to make the others responsible for a piece of the work. They will run faster if you give them that responsibility. (Medical leader, SL)*

Discussion

Based on the team character of IPUs in which a diverse group of professionals work together to deliver optimal care for a patient group, we expected leadership to be shared among all IPU members. Furthermore, we aimed to investigate the role of formal leadership structures in the emergence of this shared leadership within an IPU. To achieve this, we sought to reveal who exhibits leadership behavior in the IPU and whether leadership is shared among IPU members and examined how formal leadership structures may support or hinder the development of shared leadership.

First, although formal leaders are more likely to demonstrate task-oriented, change-oriented, and relations-oriented leadership behaviors within an IPU, all members of an IPU partake in a similar external leadership style by representing their respective professional groups. Contrary to our expectations, this indicates that leadership is not fully shared among all IPU members. This is in line with some previous studies that concluded that leadership remains linked to having a hierarchical position (van der Hoek & Kuipers, 2022). Further, it reflects the social structure of hospitals in which a dominant professional logic of hierarchy leads to a centralization of power among those considered experts (Bate, 2000). Although our research did not reveal evidence supporting leadership being shared among all IPU members, one should not ignore those few IPU members who demonstrate leadership behaviors independent of their formal positions. Some individuals assume leadership responsibilities based on them having the most relevant knowledge. This indicates that there are opportunities for sharing leadership that could be developed in IPUs. Given the existing literature on teams that considers shared leadership to be most suitable in a team-based context, and which has proven its positive relationship with team performance (Carson et al., 2007; D'Innocenzo et al., 2016; Nicolaides et al., 2014; Wang et al., 2014), future research is needed that explores leadership development in IPUs and that enhances our understanding of the potential advantages of sharing leadership in IPUs.

A second contribution of this research is that we have related who demonstrates leadership behavior in the IPU to the formal leadership structures. Our findings yield two central underlying mechanisms through which these formal leadership structures may influence the emergence of shared leadership.

First, our results show that the formal leadership structure can have a role in creating or inhibiting opportunities for IPU members to engage in leadership behavior. Whether IPU members have the opportunity to enact leadership behavior

seems to depend on the knowledge and resources they have at their disposal. Our results indicate that in IPUs that have a leadership team, those IPU members who have a formal leadership position form a subgroup within the IPU in which most of the IPU knowledge and resources reside. As previous scholars have suggested (Richter et al., 2006; Zhang et al., 2012; Ziegert & Dust, 2021), having such a subgroup can disrupt the flow of information and communication between the subgroup and the rest of the team. This seems to be the situation in IPUs with a leadership team, where IPU members without a formal leadership position do not have the level of knowledge and resources necessary to perform leadership roles. Although previous research has identified increased sharing of knowledge among team members as an outcome of shared leadership (Han et al., 2017; Zhu et al., 2018), our results suggest that this may also be a precondition for shared leadership to emerge. Specifically, they suggest that formal leadership structures may affect the emergence of shared leadership through its influence on the level of shared knowledge. Future research could further investigate the proposed relationship linking formal leadership structures, knowledge sharing, and shared leadership.

Second, the findings suggest that the formal leadership structures may influence the extent to which IPU members feel the need to engage in leadership. In particular, they suggest that a formal leadership structure can influence the sense of interdependency among IPU members. A sense of mutual interdependence seems more present among IPU members in an IPU with a single formal leader compared to IPUs with multiple formal leaders. In IPUs with a single leader, IPU members seem to be aware that this leader, with expertise in only one area, is not sufficiently equipped to be able to lead them to the accomplishment of IPU goals. The level of task interdependence they experience increases their felt need to engage in leadership behavior. Previously, a similar positive relationship between task interdependence and the emergence of shared leadership has been identified (Fausing et al., 2015; Nicolaides et al., 2014; Pearce, 2004). Our findings extend this knowledge by proposing that formal leadership structures—either a single formal leader or a leadership team—may influence this sense of interdependence and thereby the emergence of shared leadership. Scholars are therefore encouraged to further examine the role of task interdependence in the relationship between formal leadership structures and shared leadership.

Finally, on a note of caution, within this study, we investigated the emergence of shared leadership within specific formal leadership structures. The behavior of IPU members appears to align with the formal leadership structures. However, we acknowledge that the choice of formal leadership structures might have been influenced by the behaviors of IPU members before the formal leadership structures were established. Therefore, existing teamwork dynamics or informal leadership behaviors could have played a role in shaping the selection of leadership structures for the IPUs. As a result, although our research suggests an interrelationship between formal leadership and shared leadership in IPUs, it does not conclusively determine any cause-and-effect relationship.

The limitations of this study should be acknowledged. First, a limitation of this research is its cross-sectional nature, which did not allow for an examination of leadership—both formal and shared—within IPUs over time. Consequently, the associations and mechanisms found do not necessarily imply a causal direction between the choice for a formal leadership structure and the emergence of shared leadership. Additionally, it is possible that formal leadership structures within the IPU were established based on preexisting teamwork dynamics or informal leadership behaviors. However, the rationale behind these choices was not within the scope of our research. Conducting a longitudinal study that examines IPU members and their leadership behavior over an extended period of time in differing formal leadership structures will allow for assessing such causal relationships.

Second, we inferred leadership behavior from what IPU members told us about their own behavior. Although this provided insight into perceived leadership behavior through multiple sources of information, one cannot be sure that these explanations correspond to actual behavior. Further, although our approach was appropriate for examining leadership as an interpretative phenomenon, not explicitly asking interviewees about leadership behavior could have led to an underreporting of leadership behavior in the IPU. This suggests an opportunity for future research to extend our study by examining the actual leadership behavior of IPU members. A study in which IPU members are asked to assess their own and their IPU leaders' leadership behavior, and vice versa, supplemented with participant observations, could give rich insights into perceived and actual leadership behavior in IPUs.

Third, the results of this study may not be representative of the broader landscape of IPUs. Although multiple IPUs from various hospitals addressing different conditions were included, we cannot be certain that our suggestions about shared leadership in IPUs correspond with practices in IPUs in other contexts. Investigating the interplay between formal and shared leadership in IPUs across a broader range of contexts, such as different countries or health systems, could provide further insights in leadership dynamics in IPUs.

Practical Implications

The findings of this study point toward practice implications related to the roles of both staff managers and IPU members. First, leadership teams are generally expected to create a more horizontal and inclusive environment, but our findings suggest that this often does not occur naturally, largely because health professionals remain accustomed to top-down medical leadership. This challenge is even greater within IPUs, where teams span multiple departments and leadership still often follows the traditional department structure. Staff managers together with hospital boards are essential in prioritizing the preparation of leaders to succeed within this structure. They achieve this by establishing clear role descriptions and providing education on horizontal leadership team structures for both leaders and IPU members. This approach embeds leadership teams in the IPU and allows them to take responsibility.

Second, the findings indicate that sharing information and resources, a key element in any team, varies based on the leadership structure. In IPUs with a single leader, information and resources are seamlessly shared across all members. However, in IPUs led by leadership teams, sharing occurs both among the leaders and with the broader IPU, creating multiple layers of communication. This complexity demands a well-structured strategy for sharing information and resources, such as creating clear communication channels, regular feedback loops or check-ins, and a dedicated information hub.

Conclusion

Reorganizing health care in the form of IPUs disrupts traditional lines of authority and requires new forms of leadership. Although it can be argued that shared leadership fits the interprofessional nature of IPUs, we found that leadership behavior is mainly demonstrated by those in formal leadership positions. To better understand its theorized potential, we encourage future researchers to further explore shared leadership development in IPUs. We have seen that formal leadership structures—having a single leader or a leadership team—can both encourage and hinder the emergence of shared leadership by influencing both IPU members' opportunities and felt need to exhibit leadership. We encourage staff managers and IPU members to define clear roles for leaders and establish a structured strategy for sharing information and resources, such as communication channels and regular feedback loops.

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