Assessing the Integrative Framework for the Implementation of Change in Nursing Practice: Comparative Case Studies in French Hospitals

Israa Salma [1,*] **and Mathias Waelli** [1,2]

[1]   Inserm U 1309-RSMS ARENES UMR 6051, Management Institute, EHESP, CS 74312, CEDEX, 35043 Rennes, France; mathias.waelli@ehesp.fr

[2]   Global Health Institute, Geneva University, 1202 Geneva, Switzerland

*   Correspondence: israa.salma@eleve.ehesp.fr; Tel.: +33-(0)6-62-10-25-33

Abstract: The implementation of healthcare policies in healthcare organizations is a pivotal issue for managers. They generally require a change in professional practices. In previous work, we developed the Integrative Framework for Implementation of change in Nursing Practices (IFINP) to support implementation initiatives for such change in nursing practices. We aimed to assess the generalizability of IFINP in other organizational settings and explore links between strategic and socio-material factors during implementation. We used a comparative qualitative case study at three French hospitals to assess the implementation of certification procedures. Data were collected from 33 semi-structured interviews with managers and nurses. Narratives reflecting actions and interactions were extracted and deductively analyzed using IFINP components. The results showed that the framework was flexible and captured the different aspects of implementation actions and interactions at the three hospitals. Strong interferences were identified between mobilization mechanisms and strategic elements. Interferences were observed mostly between 'reflexive monitoring and work articulation', and 'reflexive monitoring and sense-making' mechanisms. Leadership was integrated into the different mechanisms, especially the 'translation' mechanism. The IFINP facilitated a greater understanding of strategic elements and associated relationships with social and material factors during implementation. It helps to provide a clear definition of the managers' role when implementing new nurse practices.

Keywords: implementation; integrative framework for implementation of change in nursing practices; strategic level; socio-material factors; interferences; mechanisms of mobilization; leadership; local managers

1. Introduction

Over the past decades, healthcare policies, and reforms have constantly evolved to improve efficiency and benchmarks for cost-effectiveness and quality of care [1]. Multiple external quality control procedures have been implemented to ensure the quality and safety of patient care [2]. Implementing such quality initiatives is a pivotal issue, first due to the complexity of healthcare systems [3]. Second, healthcare providers often feel disconnected from top-down decisions, as they consider these quality initiatives as being imposed on them [4]. For instance, although quality improvement (QI) initiatives are increasingly adopted in healthcare organizations [5,6], often they lead to sub-optimal outcomes in healthcare [7]. In our study, quality initiatives reflect the structural aspect of quality in patient care, which can be policies, programs, standards, and practice. These create the environment in which functional care processes occur, in our case in nursing activities [8]. Effective implementation of these initiatives is associated with positive patient and staff outcomes and enhances care cost-effectiveness [9]. However, the failure of such an implementation may have a serious impact, causing additional workloads and increased

staff burden [10,11]. Previous research reported that anxiety toward integrating innovations in practice is a common concern [12]. Implementing such changes into routine practice is recognized as challenging and its outcomes are unpredictable and uncertain [13]. As a consequence, researchers have investigated how to effectively implement change into clinical practice [14] by identifying factors that may impact implementation processes and using models, theories, and frameworks [13,15].

The implementation, as a subject, has been investigated from two different perspectives. The first draws primarily on a strategic approach. It identifies a wide range of transversal factors and implementation strategies, which can be useful in multiple clinical settings, including leadership, culture, resources, and others [16,17]. Similarly, multiple frameworks, models, and theories have been developed [18,19] to support implementation initiatives [20–22]. The second is centered on activity levels and focuses on local socio-material contexts and their impact on implementation processes [23,24]. A socio-material context is built upon the intersection of materials or technologies (e.g., electronic health record EHR, checklists, etc.), work and organization of everyday life. It constitutes the local context of activity in our study nurse's activity [23]. Additionally, these perspectives focus on a clinical manager's role to generate quality improvements/results [25]. Andreasson et al. speak of a potential risk of failure in implementing such changes in care processes by top management given the existing gaps between strategic and operational levels in hospitals [26]. Previous research reported that bridging such gaps between strategic and activity levels primarily depends on clinical managers translating and adapting intended changes to local contexts [25,27], as outlined in the theory of middle management roles [28].

Facilitator factors related to work settings at strategic levels [29] and the dynamic aspects of local contexts, and how they interrelate during an implementation process, are both essential steps towards an effective implementation at the activity level [30]. However, these factors are generally, separately addressed. Thus, it is important to address both steps in an integrative framework to identify strategic levels, consider specificity, and analyze the local context of implementation. For example, how is leadership operationalized in an implementation process, given its complexity and the overlapping reality of the local context? Within these perspectives, we previously developed a framework for the implementation of innovation at nurses' levels, i.e., the Integrative Framework for Implementation in Nursing Practice (IFINP) [31]. The framework was developed using a two-step mixed approach. The first was an inductive analysis of the certification implementation procedure at a teaching hospital. The second was a deductive analysis using two theoretical approaches: the quality implementation tool (QIT) [32] and translational mobilization theory (TMT) [33].

While multiple implementation frameworks have been developed, limited studies have evaluated the usefulness of these promising approaches [18]. In this study, we first tested the IFINP using certification implementation procedures as an example in multiple case study settings (three French hospitals). Our strategy was to identify how framework components captured implementation processes in multiple organizational settings. Secondly, we explored the links between strategic elements and socio-material factors of the implementation process in a local context.

2. Materials and Methods

2.1. Choice of Certification Procedures

The implementation of certification procedures was used as the subject to test the IFINP. First, a certification is considered as one of the main "peer evaluation techniques" in Europe, which is based on the International Organization for Standardization. In France, certification is mandatory in both public and private health organizations [34]. Thus, it was useful to study implementation processes in different organization types. Second, the evaluation strategies of certification are based on standards and benchmarking, and must, given this, include the best clinical practices, processes audits and associated quality and safety indicators [34]. The implementation of certification regulations is a key managerial issue, in terms of its integration and sustainability in professional routine practices [35],

especially, where it is perceived, given the multiple requirements and increasing workload for professionals [6], mainly primarily nurses [36]. However, the requirements are essential for improving care quality and patient safety [37]. Thus, it was important to assess the framework utility in understanding the implementation processes of certification implementation procedures in multiple organizational settings.

2.2. Study Design

We used a comparative qualitative case study approach. A case study examines phenomena in 'real life' contexts [38], e.g., understanding the implementation of an intervention in a healthcare system [39]. This approach explores phenomena from different perspectives; "Through case-by-case comparisons, the analyst fine-tunes, modifies, and qualifies the propositions so that they express precisely the limiting conditions revealed by the pattern of findings across all cases" [40].

2.3. Study Locations

In order to assess the IFINP in multiple contextual settings, we selected two hospitals in western France, distinguished by size, type, and status. IFINP had previously been developed by us in high-risk sectors at a teaching hospital center (hospital A) [31]. To broaden our remit, we investigated other sector types in hospital A, and also other hospital types (B and C) (Table 1). Thus, this study was based on a sample of three hospitals only. Given the COVID-19 pandemic, multiple hospitals refused to participate.

Table 1. Hospital characteristics.

Hospitals	A	B	C
Type	Teaching hospital	Hospital	Hospital
Size (beds)	924	991	450
Status	Public	Public	Private
Selected Sites	Medicine	Medicine Intensive care unit (ICU) Endoscopy	Medicine Palliative care Operating room

2.4. Data Collection

Data was collected using semi-structured interviews with relevant actors involved in certification implementation procedures (Figure 1). Due to the ongoing COVID-19 pandemic and associated restrictions, we were unable to conduct observations at study sites.
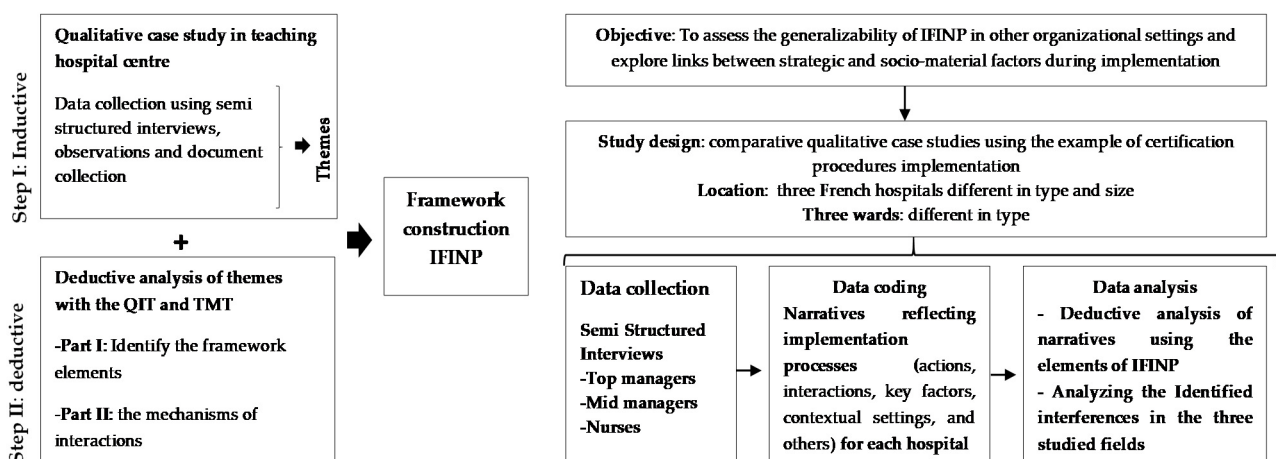

Figure 1. Flow diagram summarizing the used methodology to construct and assess the IFINP.

Interviews

As multiple actors at different organizational levels were involved in certification procedures, interviews were conducted with actors at different hierarchies. This approach provided in-depth insights on the role and responsibilities of actors in each local context and provided a better understanding of the different factors impacting the process [41]. Interviews were conducted until 'data-saturation'; interviews were conducted until outputs provided non-essential data related to study objectives [42]. To avoid bias related to directed enquiries on framework components, interviews were conducted in a comprehensive manner; we discussed the implementation of certification procedures and processes at nurse activity levels. Furthermore, we elaborated on elements contributing to successful change integration processes imposed by these procedures on nurse practices. Interviews were conducted by the PI (IS), either face-to-face or online, according to hospital regulations and participant preference.

In total, 33 semi-structured interviews were conducted at the 3 sites. To ensure participant anonymity, interviews were sequentially numbered in each site, using acronyms based on participant roles: TL, top leader; MM, mid-manager; and RN, registered nurse. A, B, and C denoted the site. For example, the top leader 1 at site B is TL1-B; register nurse 5 at site C is RN5-C.

2.5. Data Analysis

2.5.1. The Theoretical Framework

The IFINP framework was developed to conceptualize innovation implementation at nursing activity levels in French hospitals (Figure 2). The framework distinguished two key components in implementation certification procedures. Firstly, contextual settings were considered as strategic elements, e.g., actors, organizational logistics, structures, materials, technologies, interpretative repertoires, and implementation leadership approaches [43]. Secondly, mobilization mechanisms encompassed actions, practices, and interactions between these elements. The framework incorporated five mechanisms: (1) object formation, (2) translation, (3) sense-making, (4) reflexive monitoring, and (5) work articulation. These shaped and guided the implementation processes, thereby reflecting local socio-material factors [31]. The framework also showed how an implementation context consisted of both social and material elements interacting together in a continuum, rather than a linear 'pipeline' approach [44].

IFINP (Figure 2) facilitates the implementation of innovation into practice. It identifies different macro and meso levels during an implementation process. Macro levels reflect healthcare systems. Meso levels reflect organizational levels that consist of contextual settings and actors involved in certificate implementation processes at different organizational levels. Mobilization mechanisms also include object formation, translation, work articulation, reflexive monitoring, and sense-making. These shape the interrelationships between framework components. IFINP also identifies the leadership approach of change leaders at local levels (champions and/or local managers) [31].

2.5.2. Data Coding

All narratives reflecting implementation processes, such as actions, interactions, key factors, contextual settings, and others were stored in separate computer files with respect to each hospital. Narratives were then used in a deductive analysis using framework elements in a table format (Table A1 (Appendix A)). To ensure analytical credibility, both authors conducted a simple test to characterize categories and define inclusion and exclusion criteria; authors separately conducted coding for a sample of narratives ($n = 30$) according to definitions (Table A1). Then, a discussion followed regarding the primary results of coded sample narratives. This process helped frame each category and define inclusion and exclusion criteria. Then, the principal investigator (IS) performed narrative coding steps. Study reporting guidelines were based on consolidated criteria for reporting qualitative research (COREQ) (Table S1) [45].
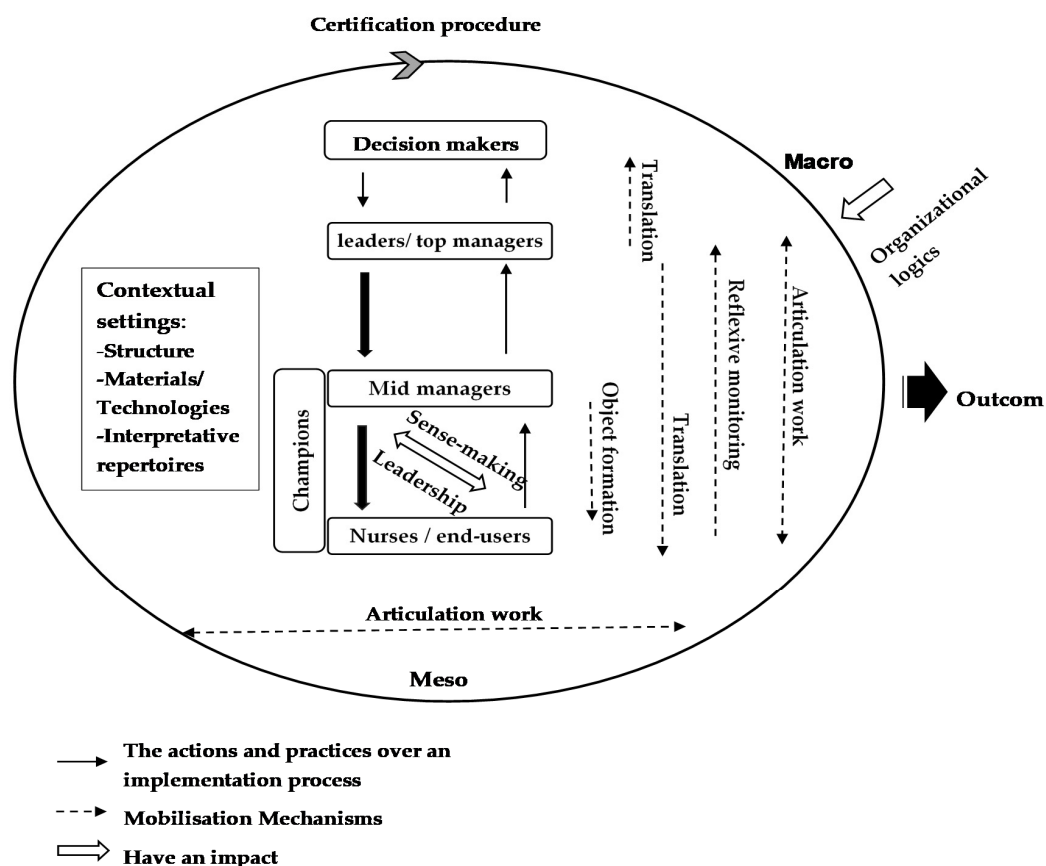
Figure 2. The Integrative Framework for Implementation of change in Nursing Practices (IFINP).

2.6. Research Ethics

This study involved professionals and no patients or human experiments. In France, this type of study does not require institutional review board (IRB) authorization, as is the case in the United States [46]. In France, according to "Jarde law" L1121-1 PHC, three study types involving humans require ethical approval: (1) human interventional studies, (2) studies with minimal risk and intervention, (3) and non-interventional studies (in the context of patient data) [47]. According to qualitative research ethics guidelines [48], signed consent from participants is adequate, and interviews should be conducted in private, comfortable, and informal settings. In this study, participants were free to participate. Furthermore, to maintain strict anonymity, interviewees, and interview transcripts were anonymized and assigned acronyms.

3. Results

Firstly, all interviewee's narratives reflecting actions and elements in certification implementation procedures were captured by the framework (Table 2). IFINP categories described emergent issues at all sites (Cases A, B, and C) and sectors in the same hospital, whether general medicine, ICU, and interventional sectors (endoscopy and the operating room). Thus, the framework recognized the mobilized implementation elements, actions, and interactions for the implementation of certification procedures into routine practice.

Table 2. Analysis of the three studied contexts using the IFINP components.

	Elements	A	B	C
Mechanisms of Mobilization	Object formation	'often it is our manager that alerts us to a change in protocol' RN2	'We prepare our action map according to certification requirements. Also, all the identified risks are objectified and we define our corrective actions. These are integrated into our quality care action plan' TL1	'We put the new document on the online document management system, in order to be accessible for all professionals. We diffuse an information that it is implemented. Then each local manager is responsible to diffuse the information to their teams and implement the document' TL2
	Translation	'As a local manager we are regularly obliged clarify the interest of new procedure to professionals, why we do it, for what purpose. It is not because we write or adapt the procedure to service it will be implemented!' MM2	'we have to explain for nurses that, what they are doing in terms of certification procedures is beneficial for patient care and to improve their work, even if it is perceived as additional traceability or work' MM1	'we have to clarify that the new procedure has an interest for them and for the patient, they must find a benefit which will help change their habits a little' MM2
	Sense-making	'Nurse are involved in the implementation process. In fact, I can't do it alone, because I don't know all about their daily difficulties. I think they will be much more precise in the finesse of things, that it is why they must be engaged' MM1	'The fact that we are not directly imposing a solution but involving them (nurses) in the debate during the preparations for implementation, is major facilitator to integrate changes into their routine, I think' MM2	'In fact to write a procedure with professionals can guarantees a better appropriation. For example, bring them to reflect on their practice and work with us on the improvement possibilities gives sense to their practices' TL2
	Reflexive monitoring	'For a new protocol we have to adapt it and use it. Once we get used to it, we evaluate after that we readjust, readapt and reevaluate what is blocking or the things that are not coherent' RN1	'at times we will have some lack, one of things that we are going to implement do not necessarily fully integrated. The feedback of services will alert us on problem. And sharing professional experience and feedback to enrich services on others previous experience, so that they do not relive the same problem' TL2	'we have to report a malfunction in terms of the implemented changes, and also questioning the quality department, so this implemented changer can be readjusted' RN1
	Work articulation	'sometimes we have to go to training to learn gestures or understand why we make a gesture in such and such a way, here we discuss between us about the new change and also we exchange information' RN2	'every week there is a staff meeting in which we explain, observe, evaluate and analyze, so that teams can appropriate more' MM1	'the quality department analyzes and then following the degree of feedback, we can organize a meetings to point out the concerns that we encounter to adjust' RN1

Table 2. *Cont.*

Elements		A	B	C
Contextual elements	Organizational logics	'Really it depends on an organizational culture of quality and patient safety, it's all in that spirit' MM2	'I think it's a culture, the Culture of improving care facilitates the implementation of certification procedures' MM1	'we have to boost the culture of the quality approach between professional, which is quality and risk management culture' TL1
	Structure	'We are supported by the quality unit for the implementation of quality policies. The unit defines the working plan at different levels' MM2	'we have to create a steering committees with all the departments, all the wards heads, the pole managers to be able to discuss all the themes in order to start organization', TL2	'there is members of the management committee or wards executives, thematic referents, different bodies the CLIN * the CLUD *, we have professionals who can be nurses or other professionals' TL2
	Materials and technologies	'first, we must have the materials in our disposal, which is it necessary to implement a new procedure' RN2	'We conduct always an analysis of the situation, we review we have and potential resources that we can have, and also we work with the concerned people' MM2	'Usually the procedure is created, often it is by a higher level it means the direction. we have our informatics system in which all our protocols are grouped together' RN5
	Interpretative repertoire	'For example we have a protocol file in the department, in which is identified how to conduct a such and such care, it means the working process of care that should be followed' RN2	'We already have tools supporting the implemented changes. For example, on the computer there is a folder for the recent information, we also have an information file. I use these sometimes for certain protocols' RN1	'We have an administrative support for our protocol, and we know that we can refer for information in there. I think, this, helps a lot, not only to go have all the information supporting our practice but also to be up to date' RN5
	Implementation leadership	'The proximity manager it has a central role in the appropriation of caregivers to change, by their functioning mode. as proximity manager, I think I am really in the loop, we go within the teams and we identify main elements and barriers, and we try to find solutions' MM1	'We support them (nurses) on their knowledge and competence, their own current resource, In fact we listen to their need for supervision, and support then on their own practice' MM2	'I am there in pilot of certification. I actually organize the dispatching of certification themes of different actors, and I ensure the proper follow-up and the good timing with the other pilots in charge of the in implementation at the activity level' TL2
	Champions	'The nurse 'referent' participates in the implementation process in the concretization in the drafting of the quality approach, she can also give ideas, but this is more by the quality unit and managers' MM2	'I was hygiene referent, I was like an interlocutor of the hygiene cell of the hospital, in fact as hygiene referent I have lot of organizing role, for example when the hygiene protocols change we informed the team, put the change in file of information' RN1	'but all nurses are concerned in the implementation of certification procedure, however you have motor nurses who are generally the specialist referents and then others who follow more or less voluntarily' TL1

CLIN *: nosocomial infection control committee; CLUD *: committee for pain relief and control.

Secondly, we identified overlapping aspects with respect to framework elements. Multiple narratives showed interference between two or more mobilization mechanisms and also between strategic elements and mobilization mechanisms (Table A2 (Appendix B)). In-

terference is understood as an overlap or an intrusion of two or more elements during a process. In this study, we used 'interference' to describe the overlaps identified in certification implementation procedures. Interview analysis showed that overlaps were mostly observed between both 'reflexive monitoring and work articulation' and 'reflexive monitoring and sense-making' mechanisms at the three sites. However, the 'object formation' mechanism was only weakly associated with the 'translation' mechanism when compared to the other mechanisms. Some narratives reflected associations between multiple mechanisms, and sometimes with contextual elements. For example, *"we use quality meetings to explain certification procedures to managers and professionals. We work with the quality unit who provide regular updates on different indicators and outcomes. Also, our auditing systems help us monitor the integration of new procedures into routine practice"* TL1-C reflecting shifts between 'translation', 'reflexive monitoring', and 'work articulation'. In another example, *"for implementation procedures, we identify referents/champions, we improve their skills and train them in methods and tools required for certification, quality and risk management, so they can introduce/implement change and help nurses to change"* TL2-B. This statement reflected the leadership of the referent/champion through 'reflexive monitoring' and 'work articulation' mechanisms. In this study, 'referent' is a key actor in the implementation process and is considered a champion; the term refers to their role [31]. In addition, leadership was associated with each mechanism but strongly interfered with the 'translation' mechanism. We identified two leadership levels. The higher level generally interfered with 'object formation' mechanisms; *"we are supported by the quality unit of our hospital in implementing quality policies; their help defines the working plan at different levels"* MM2-A. The leadership proximity manager and/or the leader of change at the professional level states, *"we provide necessary training for nurses and we consider different contextual settings in which to implement new practice changes, such as working procedures and essential documents, so when we introduce change we have everything in place"* MM2-B. Given the dynamic aspect of an implementation context, it is important to consider the local socio-material impact as well as barriers and facilitators that may impact implementation processes. This operationalizes strategic elements, such as leadership within a local context and shows how they are interrelated (Figure 3).
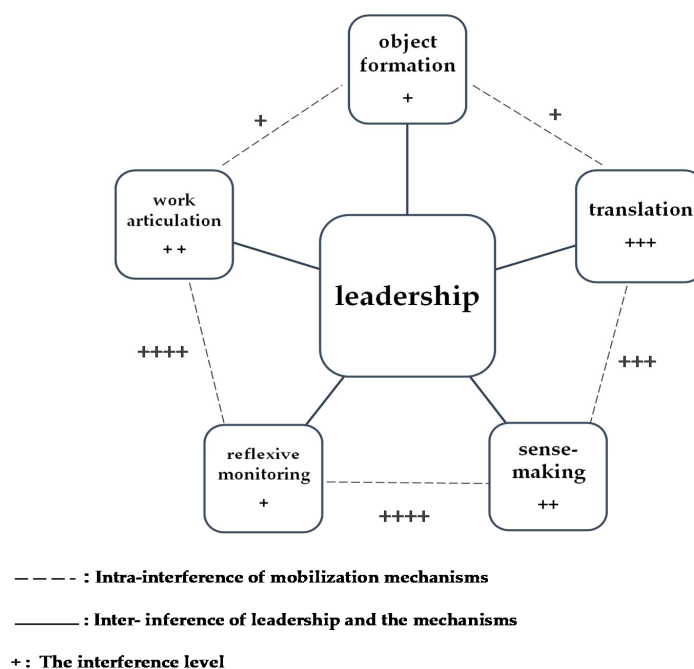

Figure 3. General representation of interference on mobilization mechanisms and leadership elements. The + signs represent interference levels, the power of interferences seen is reflected by the number of + signs such as ++, +++ or ++++. Dashed lines represent intra-interference mechanisms. Full lines represent the inter-interference of leadership and mechanisms.

The following sections outline stratified comparisons between the three case studies based on interferences identified between mobilization mechanisms and leadership.

3.1. Comparison of 'Object Formation' and 'Translation' Mechanisms and Interferences with Leadership

'Object formation' reflects the initial mobilization step of certification procedures within an organization. We identified similar practices for this initial step across the three sites (Table A3 (Appendix C)). Generally, the TL, MM, specialists, and a steering committee enacted action plans based on certification criteria and departmental evaluations. This plan defined the objectives and actions of each department. All information regarding procedures or actions was communicated by managers or informatics systems. At the nurse level, referents/champions or local managers were charged with communicating procedures and changes, either during meetings, e-mail and/or circulated documentation. In essence, they prepared the local context to accept change. 'Object formation' was accompanied by 'translation' mechanisms. The introduction of any procedure must be defined in terms of needs and requirements. For example, at the organizational level, this was done by explaining 'why' and 'how' a procedure was to be introduced and integrated at each level. At the local professional level, this was justified as a procedural need and benefit for patient care and depended on the leadership skills of proximity managers to use formal and informal strategies to support and provide meaning to the implemented change.

3.2. Comparison of 'Sense-Making', 'Reflexive Monitoring', and 'Work Articulation' Mechanisms with the Leadership

Communicating information and explaining procedures does not guarantee an effective implementation; it must also make sense for professionals: *"we can write a procedure, we can explain it, and we can introduce it to nurses, but the most important thing is that this procedure is effectively implemented in their daily practice" MM2-A*. We identified multiple managerial strategies to make sense of the implemented procedures in nurse practices (Table A4 (Appendix D)). Primarily, managers insisted on involving nurses in these procedures, often at inception. Nurses were actively engaged in the development and writing of procedures (sites A and B). This also involved organizing interventions, giving feedback and opinions on procedures and changes (site C). Local managers also provided administrative support for professionals using informatics systems or documentation. These steps were essential for working procedures and policies. This was identified as a tool supporting professionals' practices. In addition, to effectively implement a procedure, interviewees highlighted the usefulness of a pilot period, which allowed professionals to live and experience the change, readjust and adapt according to local context reality, and unlimitedly accept it and use it.

We observed similarities in 'monitoring' and evaluation methods across the three sites. 'Reflexive monitoring' was represented by 'formal' tools, such as auditing systems, indicators, professional practice evaluations, and adverse events. Additionally, 'informal' methods were facilitated through a professional's feedback on procedural feasibility, which relied heavily on the local leadership. Nurses provided feedback either directly to local managers and referents, or at regular team meetings. This helped evaluate procedures and air concerns. The 'reflexive monitoring' mechanism interfered not only with 'sense-making' mechanisms, but also with 'work articulation' mechanisms. Continuous monitoring was fundamental to ensuring corrective actions and improved procedural integration. These continuous improvements are incorporated into work articulation mechanisms. The ability to conduct continuous and regular meetings and ensure communications between actors at multiple organizational levels allowed actors to readjust, adapt, and formalize change trajectories.

4. Discussion

We tested our IFINP framework for the implementation of certification procedures using a comparative case study design in three French hospitals.

Firstly, we demonstrated framework flexibility in capturing the reality of certification procedure implementation in multiple settings in different French healthcare organizations. The IFINP successfully identified different actions and interactions between actors, contexts, and implemented procedures, regardless of sector type, hospital type, and size. Although the framework was originally constructed using a case study in high-risk sectors at a teaching hospital [31], it was practical for explaining certification procedures in other sectors (medicine; case A), as well as other hospital types (cases B and C). This provided a formal framework to understand mechanisms where individual and organizational contexts affected innovation integration into nursing practice [18].

Secondly, we revealed strong interferences between the IFINP elements during implementation processes. Repeatedly, participant narratives reflected an interposition between different mobilization mechanisms during certification implementation across the three sites. However, mostly, interferences were identified between 'object formation' and 'translation' mechanisms at higher manager levels, and 'sense-making', 'reflexive monitoring', and 'work articulation' mechanisms at activity levels. This may be explained by the presence of two implementation phases. The first phase reflected the adoption of certification procedures at the organizational level and involved actions related to the preparation of the initial mobilization and change diffusion, and was mostly seen at higher levels. For instance, through regular teams' meetings, leaders defined the organizations' plan with other actors, and they explained and translated certification criteria in daily practice.

The second phase reflected the appropriation of implemented change by professionals into their routine practice. This involved different actions by local managers, or change leaders, leading to the effective integration of change. For example, professional involvement in procedures responded to 'sense-making' mechanisms and was observed by an active engagement via analyses and evaluations. Furthermore, feedback and improvement suggestions interfered with the 'reflexive monitoring' mechanism. Additionally, through 'reflexive monitoring', e.g., monitoring meetings, managers, and professionals defined corrective actions, they continuously evaluated, adapted, and readjusted implemented procedures according to local context requirements and interfered with the 'work articulation' mechanism. The healthcare system complexity [49] is accompanied by implementation procedural complexity—via multiple contributors and multifaceted and multidimensional strategies [50]. This situation requires a dynamic constituent to improve the uptake of important changes by professionals [51]. Thus, identifying interferences in IFINP mobilization mechanisms and elements during certification implementation procedures is important and supports the non-linearity aspect of implementation processes [24].

In addition, the IFINP helped exemplify the leadership factor. Leadership interference with different mobilization mechanisms was useful in defining the content and activity undertaken by change leaders and their response to mobilization mechanisms. For example, leadership at the organizational level involved top leaders providing information and clear instructions on adopted changes. They also supported managers and professionals at regular meetings [52,53]. This situation reflected an interference of leadership in terms of 'object formation' and 'translation' mechanisms. In addition, leadership approaches [54] at the local level interfered with translation, sense-making, reflexive monitoring, and work articulation mechanisms. This scenario provided important insights into the change leaders' role in translating and adapting procedures to the local context and thus, integrating them into professional practice. These outputs also highlighted their willingness to implement certification procedures at the three sites. From this, a question arose on the place of local managers' roles and activities, which must be considered by decision-makers in implementing quality policies [25]. Using the IFINP, we showed that the leadership approach involved considerable translation, support, and monitoring changes, whereas other strategic ap-

proaches emphasized the leadership as facilitators, without clear conceptualization [55,56]. Thus, the IFINP helped frame these elements within the local implementation context.

Thirdly, the stratified comparisons of IFINP elements based on overlaps revealed major similarities between implementation strategies and interventions across different sector types (case A) and hospitals (cases B and C). This suggested an independent aspect of certification implementation strategies in terms of multiple sectors' types at the three sites. This could be explained as the generation of work harmonization and standardization processes between French healthcare organizations in terms of quality management [57] and which can be understood by the concept of institutional isomorphism [58]. DiMaggio and Powell (1983) identified three mechanisms: coercive, mimetic, and normative, through which isomorphism occurs [59]. A certification responds to coercive and normative mechanisms. First, it is performed by external stakeholders to implement different regulations and standards [60]. Second, it emphasizes the need for professionalization and the importance of establishing cognitive and professional standards [59]. Thus, we suggest that implementing such changes in nursing practice is established within the framework of institutional isomorphism for quality improvement in patient care [61,62]. To address this suggestion, we advocate the study of international contexts and other types of managerial innovation.

Study Limitations

We acknowledge several study limitations. Our cases focused on the implementation of certification procedures at the nurse level, thus participants at the activity level were nurses. However, the implementation scope was broad and certification procedures involved many professionals, not only nurses. Thus, we may have missed data on some implementation processes. Secondly, in terms of our data collection methods, the study was primarily based on semi-structured interviews. However, given the COVID-19 crisis and associated hospital restrictions, a limited number of hospitals participated in this study, and we were unable to conduct observations at sites, which may have limited some study elements. However, to overcome this, we thoroughly discussed certification implementation procedures with actors and sought examples from their previous experiences. Finally, we tested the framework in multiple hospital settings, but based on the last iteration of certification and not during the implementation process of certification. However, in the future, it will be interesting to test the IFINP in real-time of certification procedures implementation using on-site observations and interviews in a larger sample of hospitals and sectors.

5. Conclusions

Using comparative cases studies, we assessed the IFINP. The framework robustly provided insights on existing interferences between framework components, mechanisms, and elements, and practically explained certification implementation procedures in multiple contexts. The IFINP provided concrete and explicit insights on leadership in terms of a change in a leader's activity in the implementation process. Our framework goes beyond previous work in implementation by offering an integrated perspective on the social and material elements of the local context involved in implementation processes. Therefore, we advocate IFINP as a tool for managers and policymakers to support the implementation of quality initiatives in nursing practices, regardless of the organization type.

Appendix A

Table A1. Definitions of IFINP components based on the previous literature [33,43,63].

	Elements	Definition
Mobilization mechanisms	Object formation	"practices that create the objects of knowledge and practice and enrol them into a project"
	Translation	"practices that enable practice objects to be shared, and differing viewpoints, local contingencies, and multiple interests accommodated to enable concerted action"
	Sense-making	"practices though which actors interpret, order, construct, and account for projects, and at the same time, produce and reproduce institutions"
	Reflexive monitoring	"practices through which actors evaluate a field of action to generate situational awareness of project trajectories"
	Work articulation	"practices that assemble and align elements (people, knowledge, materials, technologies, and bodies) through which object trajectories are mobilized within projects"
Contextual elements	Organizational logics	"elements which provide a set of normative conventions that define the scope of possible action, and shape its purpose"
	Structure	"elements that stratify social relations, e.g., social roles, division of labor, professions, hierarchies, departments, units, and teams"
	Materials and technologies	"elements that provide agents with the physical artefacts to support their practice, e.g., tools, technologies, bodies, and knowledge"
	Interpretative repertoire	"elements that provide agents with the cognitive artefacts for sense making or for example, classifications, scripts, categories, discourses, and routines"
	Implementation leadership	"strategic approaches characterized by influencing behaviors to promote success in implementation"
	Champions/referent	'Key actors may emerge during an implementation process, sometimes as part of an intervention, sometimes as part of an implementation strategy, and at times, neither'

Appendix B

Table A2. IFINP components interferences. This table presents the analysis of interviewees' narratives reflecting the interferences of INIFP components, mechanisms of mobilization, and factors. Retrieved elements simultaneously in each narrative are checked by x.

Studied Site		Narratives	Mechanisms of Mobilization					Factors	
			O.F.	Trans.	S.M.	R.M.	W.A.	Lead.	C.S.
A	MM1	Well, we have a table about what we are going to do, we have a map in fact of our actions which is an action plan, . . . we must not perceive and live the certification as a barrier, there are a lot of people will say "it's the certification!", they take it as sanction! but for me it allows to pilot and improve	x	x					
		first it must makes sense, so the sense, the time to do things, and haves the appropriate environment			x				x
	MM2	We are supported by the quality unit for the implementation of quality policies. The unit defines the working plan at different levels. For example, you have to implement this procedure at this and this places, such and such levels, then we actually redact this quality procedure	x	x				x	
		Really it depends on an organizational culture of quality and patient safety, it's all in that spirit, and I think it's essential to make sense for nurses, because we only do things if we understand . . . We explain to them that we implement this to ensure optimal and secure patient care.		x				x	x
		Only nurses know the best to talk about and how to implement these certification procedure, it is their daily work, and routine practices . . . they are the ones who are able to readjust and re-evaluate, so that they are involved in write things that make sense			x	x			
	RN1	There are nurses referents for these protocols, for example the referent of hygiene who gives us the information or also could be by our local manager it depends, these are information meetings	x					x	
	RN1	It the communication first, and second there is the working procedure which describe and support our practices to make sense into our practices			x		x		

Table A2. *Cont.*

Studied Site		Narratives	Mechanisms of Mobilization					Factors	
			O.F.	Trans.	S.M.	R.M.	W.A.	Lead.	C.S.
B	TL1	She (nurse) participates in reporting the existing on term of strengths and weakness, and giving work notes. She also participates in identifying what could be useful to readjust things an then we integrate it, after that she will applies the readjustment in her daily's				x	x		
	TL2	for implementation procedures, we identify referents/champions, we improve their skills and train them in methods and tools required for certification, quality and risk management, so they can introduce/implement change and help nurses to change, an be able to accompanied and monitoring it				x	x	x	x
	MM1	Nurses are involved in certification implementation procedures, but not necessarily at writing stages. They are more involved in the analysis of evaluations and experiences with the change. It is part of the quality approach they will take their turn to analyze an adverse event situation and then try to improve this difficulty by implementing improvement actions			x	x			
	MM2	Daily feedback informs the action plan by identifying problems and setting corrective actions. This effectively integrates the procedure into routine practice. Then we can pursue new objectives to improve patient care'.				x	x		
		There are many times we conduct meeting with the teams and the specialist committee for example with the hygiene committee to discuss and improve our procedure				x	x		
	RN1	the referent has the role of interlocutor and mediator, for example mediator between the hygienist nurse and the team and then relaying questions and feedback from the team to hygienist	x				x	x	

Table A2. *Cont.*

Studied Site		Narratives	Mechanisms of Mobilization					Factors	
			O.F.	Trans.	S.M.	R.M.	W.A.	Lead.	C.S.
C	TL1	the implementation of certification impose to conduct multiple reminders with the different actor, we take advantage of quality meetings to explain them the interest of these procedure, also we collaborate with the quality unit to alert us from time to time on the feedback, we also do audits which allows us to evaluate where we are		x		x	x	x	
	TL2	the nurse is responsible for implementing everything, either in management or in teams consultation for policies definition, our professionals are there for both to be the guarantors of practice and to alert us when there is problems, so for reporting an adverse events, feedback on such or such type of deviations			x	x			
		If we want a procedure works, we must have a lot of listening and understanding of professional and their profession, understanding their work, listing to them and understanding what hurdles they confront as well as what their routine interactions					x	x	
		We have to rely on the local manager, and then it is not just disseminating a new process, it is explaining why it arrived, why we are making things evolve, and argument evolutions. in fact we have to give meaning for what are doing, if we only disseminate things, if we change things unilaterally without explanation it will not work		x	x			x	

Appendix C

Table A3. Site (A, B, and C) comparisons of object formation and translation mechanisms and interference with the leadership.

Mechanisms	A	B	C
Object formation	'Our action plan identifies work actions to implement certification procedures'. *MM1* 'Usually, there are referents for these protocols. The hygiene referent provides information, or information could come from our local manager, either directly or during team meetings'. *RN1 (leadership)*	'In thematic working groups, we identified what needed to be formalized to introduce and support procedures in sectors, and what was missing in sectors. We also defined an action plan'. *TL2* 'In general, an e-mail is sent to our manager, then she disseminates the information to us'. *RN1 (leadership)*	'Based on certification criteria, we conducted evaluations. For example, an assessment is ongoing and based on certification requirements, or new criteria will be defined and our action plan formulated accordingly'. *TL2* 'We have a file on implemented procedures which is communicated by our manager to the sector. This file holds all information, even the tiniest details, on the new procedure'. *RN4 (leadership)*
Translation	'We are supported by the quality unit for the implementation of quality policies. The unit defines the working plan at different levels'. *MM2 (leadership)* 'We explain to professionals that implemented procedures improve patient care quality and depend on the shared culture of quality and safety'. *MM1 (leadership)*	'The implemented change must be explained, why it is needed, how it meets patient care, and how it works in our practice'. *RN2* 'For nurses, certification is distant from patient care. So we communicate key information to clarify ambiguous acronyms'. *MM3 (leadership)*	'Meetings help us explain the benefits of these procedures; we must remind and communicate these with our colleagues'. *TL1 (leadership)* 'Certification implementation procedures often require translation for professionals. This is a major difficulty every time; I must translate these procedures with respect to their professional practice'. *TL2 (leadership)*

Appendix D

Table A4. Site (A, B and C) comparisons for sense-making, reflexive monitoring, and work articulation mechanisms with the leadership.

Mechanisms	A	B	C
Sense making	'Nurses are actively engaged in implementation procedures, either in procedure development or the implementation process. When nurses actively participate, they deploy and use the procedure'. *MM2 (leadership)* 'There must be administrative support and documents to describe these procedure'. *RN1*	'Nurses are involved in certification implementation procedures, but not necessarily at writing stages. They are more involved in the analysis of evaluations and experiences with the change'. *MM1 (leadership)* 'When we conduct a pilot period for an intended procedure, it's much easier for teams to continue and understand these processes. And also to use the procedure after the test period with the teams, and thus they are able to continue with it'. *MM2*	'Writing procedures with professionals guarantees a better appropriation. We push professionals to think about their practice and to work with us on improving this practice'. *TL2 (leadership)* 'Working with professionals, creating working groups, and ensuring a dynamic interaction allowing for a better understanding of what is required for an effective implementation'. *TL1 (leadership)*

Table A4. *Cont.*

Mechanisms	A	B	C
Reflexive monitoring	'We use multiple strategies to evaluate implementation. As objective evaluation methods, we use audits and professional practice evaluations etc. to assess nurses' feedback and patient experiences. We also assess their satisfaction'. *MM1 (leadership)*	'As an evaluation, we monitor professional performance and opinions. Once a nurse reports a problem, we act accordingly to adapt. For example, we previously implemented a new protocol but found it unsuitable due to infrastructure issues, therefore we resolved the issue by adjusting the architecture'. *TL1* 'We rely strongly on nurse feedback forms, their interaction with the implementation, or monitoring adverse events or other indicators'. *MM2*	'To evaluate the implementation, we use audits, informal feedback from professionals, and monthly quality reports and safety indicators' *MM2* 'Problems concerning implemented procedures are orally directed to our managers, or sometimes via an adverse event sheet'. *RN5 (leadership)*
Work articulation	'We integrate quality procedures by continuous communication, where we discuss care improvements during routine practice'. *MM1 (leadership)*	'Daily feedback informs the action plan by identifying problems and setting corrective actions. This effectively integrates the procedure into routine practice. Then we can pursue new objectives to improve patient care'. *MM2 (leadership)*	'Sometimes certification requirements are difficult to implement. Sometimes, we cannot integrate them into our routines, but by communicating and exchanging ideas with managers, we evolve and improve these requirements'. *RN4*

References

1. Wardhani, V.; Utarini, A.; van Dijk, J.P.; Post, D.; Groothoff, J.W. Determinants of quality management systems implementation in hospitals. *Health Policy* **2009**, *89*, 239–251. [CrossRef] [PubMed]
2. Araujo, C.A.S.; Siqueira, M.M.; Malik, A.M. Hospital accreditation impact on healthcare quality dimensions: A systematic review. *Int. J. Qual. Health Care* **2020**, *32*, 531–544. [CrossRef] [PubMed]
3. Strehlenert, H.; Hansson, J.; Nyström, M.E.; Hasson, H. Implementation of a national policy for improving health and social care: A comparative case study using the Consolidated Framework for Implementation Research. *BMC Health Serv. Res.* **2019**, *19*, 730. [CrossRef] [PubMed]
4. Brouwers, J.; Cox, B.; Van Wilder, A.; Claessens, F.; Bruyneel, L.; De Ridder, D.; Eeckloo, K.; Vanhaecht, K. The future of hospital quality of care policy: A multi-stakeholder discrete choice experiment in Flanders, Belgium. *Health Policy* **2021**, *125*, 1565–1573. [CrossRef]
5. Jeffs, L.P.; Lo, J.; Beswick, S.; Campbell, H. Implementing an organization-wide quality improvement initiative: Insights from project leads, managers, and frontline nurses. *Nurs. Adm. Q.* **2013**, *37*, 222–230. [CrossRef]
6. Allen, D. Care trajectory management: A conceptual framework for formalizing emergent organisation in nursing practice. *J. Nurs. Manag.* **2019**, *27*, 4–9. [CrossRef]
7. Akmal, A.; Podgorodnichenko, N.; Foote, J.; Greatbanks, R.; Stokes, T.; Gauld, R. Why is Quality Improvement so Challenging? A Viable Systems Model Perspective to Understand the Frustrations of Healthcare Quality Improvement Managers. *Health Policy* **2021**, *125*, 658–664. [CrossRef]
8. Kramer, M.; Schmalenberg, C.; Maguire, P.; Brewer, B.B.; Burke, R.; Chmielewski, L.; Cox, K.; Kishner, J.; Krugman, M.; Meeks-Sjostrom, D.; et al. Structures and practices enabling staff nurses to control their practice. *West. J. Nurs. Res.* **2008**, *30*, 539–559. [CrossRef]
9. Geerligs, L.; Rankin, N.M.; Shepherd, H.L.; Butow, P. Hospital-based interventions: A systematic review of staff-reported barriers and facilitators to implementation processes. *Implement. Sci.* **2018**, *13*, 36. [CrossRef]
10. Grimshaw, J.; Eccles, M.; Tetroe, J. Implementing clinical guidelines: Current evidence and future implications. *J. Contin. Educ. Health Prof.* **2004**, *24*, S31–S37. [CrossRef]
11. Grimshaw, J.M.; Eccles, M.P.; Lavis, J.N.; Hill, S.J.; Squires, J.E. Knowledge translation of research findings. *Implement. Sci.* **2012**, *7*, 50. [CrossRef] [PubMed]
12. Rasmussen, B.S.B.; Jensen, L.K.; Froekjaer, J.; Kidholm, K.; Kensing, F.; Yderstraede, K.B. A qualitative study of the key factors in implementing telemedical monitoring of diabetic foot ulcer patients. *Int. J. Med. Inform.* **2015**, *84*, 799–807. [CrossRef] [PubMed]
13. McArthur, C.; Bai, Y.; Hewston, P.; Giangregorio, L.; Straus, S.; Papaioannou, A. Barriers and facilitators to implementing evidence-based guidelines in long-term care: A qualitative evidence synthesis. *Implement. Sci.* **2021**, *16*, 70. [CrossRef] [PubMed]

14. Beauchemin, M.; Cohn, E.; Shelton, R.C. Implementation of clinical practice guidelines in the healthcare setting: A Concept Analysis. *ANS Adv. Nurs. Sci.* **2019**, *42*, 307–324. [CrossRef]

15. Orr, P.; Davenport, D. Embracing Change. *Nurs. Clin. N. Am.* **2015**, *50*, 1–18. [CrossRef]

16. Eccles, M.P.; Armstrong, D.; Baker, R.; Cleary, K.; Davies, H.; Davies, S.; Glasziou, P.; Ilott, I.; Kinmonth, A.L.; Leng, G.; et al. An implementation research agenda. *Implement. Sci.* **2009**, *4*, 18. [CrossRef]

17. Proctor, E.K.; Powell, B.J.; McMillen, J.C. Implementation strategies: Recommendations for specifying and reporting. *Implement. Sci.* **2013**, *8*, 139. [CrossRef]

18. Mitchell, S.A.; Fisher, C.A.; Hastings, C.E.; Silverman, L.B.; Wallen, G.R. A Thematic Analysis of Theoretical Models for Translational Science in Nursing: Mapping the Field. *Nurs. Outlook* **2010**, *58*, 287–300. [CrossRef]

19. Nilsen, P. Making sense of implementation theories, models and frameworks. *Implement. Sci.* **2015**, *10*, 53. [CrossRef]

20. Rycroft-Malone, J. The PARIHS framework—A framework for guiding the implementation of evidence-based practice. *J. Nurs. Care Qual.* **2004**, *19*, 297–304. [CrossRef]

21. Damschroder, L.J.; Aron, D.C.; Keith, R.E.; Kirsh, S.R.; Alexander, J.A.; Lowery, J.C. Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implement. Sci.* **2009**, *4*, 50. [CrossRef]

22. Pfadenhauer, L.M.; Gerhardus, A.; Mozygemba, K.; Lysdahl, K.B.; Booth, A.; Hofmann, B.; Wahlster, P.; Polus, S.; Burns, J.; Brereton, L.; et al. Making sense of complexity in context and implementation: The Context and Implementation of Complex Interventions (CICI) framework. *Implement. Sci.* **2017**, *12*, 21. [CrossRef] [PubMed]

23. Allen, D. Understanding context for quality improvement: Artefacts, affordances and socio-material infrastructure. *Health* **2013**, *17*, 460–477. [CrossRef]

24. May, C.R.; Johnson, M.; Finch, T. Implementation, context and complexity. *Implement. Sci.* **2016**, *11*, 141. [CrossRef] [PubMed]

25. Waelli, M.; Gomez, M.L.; Sicotte, C.; Zicari, A.; Bonnefond, J.Y.; Lorino, P.; Minvielle, E. Keys to successful implementation of a French national quality indicator in health care organizations: A qualitative study. *BMC Health Serv. Res.* **2016**, *16*, 553. [CrossRef] [PubMed]

26. Andreasson, J.; Eriksson, A.; Dellve, L. Health care managers' views on and approaches to implementing models for improving care processes. *J. Nurs. Manag.* **2016**, *24*, 219–227. [CrossRef] [PubMed]

27. Birken, S.A.; Currie, G. Using organization theory to position middle-level managers as agents of evidence-based practice implementation. *Implement. Sci.* **2021**, *16*, 37. [CrossRef]

28. Meza, R.D.; Triplett, N.S.; Woodard, G.S.; Martin, P.; Khairuzzaman, A.N.; Jamora, G.; Dorsey, S. The relationship between first-level leadership and inner-context and implementation outcomes in behavioral health: A scoping review. *Implement. Sci.* **2021**, *16*, 69. [CrossRef]

29. González-María, E.; Moreno-Casbas, M.T.; Albornos-Muñoz, L.; Grinspun, D. The implementation of Best Practice Guidelines in Spain through the Programme of the Best Practice Spotlight Organizations®. *Enfermería Clínica* **2020**, *30*, 136–144. [CrossRef]

30. May, C.; Sibley, A.; Hunt, K. The nursing work of hospital-based clinical practice guideline implementation: An explanatory systematic review using Normalisation Process Theory. *Int. J. Nurs. Stud.* **2014**, *51*, 289–299. [CrossRef]

31. Salma, I.; Waelli, M. A framework for the implementation of certification procedures in nurse level: A mixed approach study. *BMC Health Serv. Res.* **2021**, *21*, 1–12. [CrossRef] [PubMed]

32. Meyers, D.C.; Durlak, J.A.; Wandersman, A. The quality implementation framework: A synthesis of critical steps in the implementation process. *Am. J. Community Psychol.* **2012**, *50*, 462–480. [CrossRef] [PubMed]

33. Allen, D. Translational Mobilisation Theory: A new paradigm for understanding the organisational elements of nursing work. *Int. J. Nurs. Stud.* **2018**, *79*, 36–42. [CrossRef]

34. Holcman, R. Accreditation and certification. *Guides Sante Soc.* **2015**, *2*, 269–292.

35. Duval, A.-C. Ancrer le changement: Un défi des soignants lors de la démarche de certification, une étude qualitative. *Rev. Francoph. Int. De Rech. Infirm.* **2017**, *3*, 181–188. [CrossRef]

36. Myny, D.; Van Hecke, A.; De Bacquer, D.; Verhaeghe, S.; Gobert, M.; Defloor, T.; Van Goubergen, D. Determining a set of measurable and relevant factors affecting nursing workload in the acute care hospital setting: A cross-sectional study. *Int. J. Nurs. Stud.* **2012**, *49*, 427–436. [CrossRef]

37. Hesselink, G.; Berben, S.; Beune, T.; Schoonhoven, L. Improving the governance of patient safety in emergency care: A systematic review of interventions. *BMJ Open* **2016**, *6*, e009837. [CrossRef]

38. Houghton, C.; Casey, D.; Shaw, D.; Murphy, K. Rigour in qualitative case-study research. *Nurse Res.* **2013**, *20*, 12–17. [CrossRef]

39. Crowe, S.; Cresswell, K.; Robertson, A.; Huby, G.; Avery, A.; Sheikh, A. The case study approach. *BMC Med. Res. Methodol.* **2011**, *11*, 100. [CrossRef]

40. Greene, D.; David, J.L. A research design for generalizing from multiple case studies. *Eval. Program Plann.* **1984**, *7*, 73–85. [CrossRef]

41. Nyanchoka, L.; Tudur-Smith, C.; Porcher, R.; Hren, D. Key stakeholders' perspectives and experiences with defining, identifying and displaying gaps in health research: A qualitative study protocol. *BMJ Open* **2019**, *9*, e027926. [CrossRef] [PubMed]

42. Moser, A.; Korstjens, I. Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *Eur. J. Gen. Pract.* **2018**, *24*, 9–18. [CrossRef] [PubMed]

43. Guerrero, E.G.; Padwa, H.; Fenwick, K.; Harris, L.M.; Aarons, G.A. Identifying and ranking implicit leadership strategies to promote evidence-based practice implementation in addiction health services. *Implement. Sci.* **2016**, *11*, 1–13. [CrossRef] [PubMed]

44. Melo, S.; Bishop, S. Translating healthcare research evidence into practice: The role of linked boundary objects. *Soc. Sci. Med.* **2020**, *246*, 112731. [CrossRef] [PubMed]

45. Tong, A.; Sainsbury, P.; Craig, J. Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *Int. J. Qual. Health Care* **2007**, *19*, 349–357. [CrossRef]

46. Dariel, O.P.; Waelli, M.; Ricketts, T.C. France's transition to academic nursing: The theory-practice gap. *J. Nurs. Educ. Pract.* **2014**, *4*, 88. [CrossRef]

47. Jardé, L. LOI n 2012-300 du 5 Mars 2012 Relative Aux Recherches Impliquant la Personne Humaine [LAW No. 2012-300 of 5 March 2012 Relating to Research Involving the Human Person]. 2016. Available online: https://www.legifrance.gouv.fr/loda/id/JORFTEXT000025441587/ (accessed on 20 June 2021).

48. DiCicco-Bloom, B.; Crabtree, B.F. The qualitative research interview. *Med. Educ.* **2006**, *40*, 314–321. [CrossRef]

49. Pettigrew, A.; Ferlie, E.; McKee, L. Shaping strategic change—The case of the NHS in the 1980s. *Public Money Manag.* **1992**, *12*, 27–31. [CrossRef]

50. Dobbins, M.; Ciliska, D.; Cockerill, R.; Barnsley, J.; DiCenso, A. A framework for the dissemination and utilization of research for health-care policy and practice. *Online J. Knowl. Synth. Nurs.* **2002**, *9*, 149–160. [CrossRef]

51. Dryden-Palmer, K.D.; Parshuram, C.S.; Berta, W.B. Context, complexity and process in the implementation of evidence-based innovation: A realist informed review. *BMC Health Serv. Res.* **2020**, *20*, 1–15. [CrossRef]

52. Jansson, I.; Pilhamar, E.; Forsberg, A. Factors and conditions that have an impact in relation to the successful implementation and maintenance of individual care plans. *Worldviews Evid. Based Nurs.* **2011**, *8*, 66–75. [CrossRef]

53. Barr, B.J. Managing Change During an Information Systems Transition. *AORN J.* **2002**, *75*, 1085–1092. [CrossRef]

54. Wolak, E.; Overman, A.; Willis, B.; Hedges, C.; Spivak, G.F. Maximizing the Benefit of Quality Improvement Activities: A Spread of Innovations Model. *J. Nurs. Care Qual.* **2020**, *35*, 199–205. [CrossRef] [PubMed]

55. Jun, J.; Kovner, C.T.; Stimpfel, A.W. Barriers and facilitators of nurses' use of clinical practice guidelines: An integrative review. *Int. J. Nurs. Stud.* **2016**, *60*, 54–68. [CrossRef] [PubMed]

56. Qin, X.; Yu, P.; Li, H.; Hu, Y.; Li, X.; Wang, Q.; Lin, L.; Tian, L. Integrating the "best" evidence into nursing of venous thromboembolism in ICU patients using the i-PARIHS framework. *PLoS ONE* **2020**, *15*, e0237342. [CrossRef]

57. Haute Autorité de Santé. Mettre en Œuvre la Certification pour la Qualité des Soins [Implementing Certification Procedure for Care Quality]. 2020. Available online: https://www.has-sante.fr/jcms/r_1495044/en/mettre-en-oeuvre-la-certification-pour-la-qualite-des-soins (accessed on 29 September 2021).

58. Pal, A.; Ojha, A.K. Institutional isomorphism due to the influence of information systems and its strategic position. In Proceedings of the 2017 ACM SIGMIS Conference on Computers and People Research, Bangalore, India, 21 June 2017; pp. 147–154.

59. DiMaggio, P.J.; Powell, W.W. The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *Am. Sociol. Rev.* **1983**, *48*, 147–160. [CrossRef]

60. Roxas, B.; Coetzer, A. Institutional environment, managerial attitudes and environmental sustainability orientation of small firms. *J. Bus. Ethics* **2012**, *111*, 461–476. [CrossRef]

61. Alyahya, M.; Hijazi, H.; Harvey, H. Explaining the accreditation process from the institutional isomorphism perspective: A case study of Jordanian primary healthcare centers. *Int. J. Health Plann. Manag.* **2018**, *33*, 102–120. [CrossRef]

62. Currie, W.L. Institutional Isomorphism and Change: The National Programme for IT–10 Years on. *J. Inf. Technol.* **2012**, *27*, 236–248. [CrossRef]

63. Miech, E.J.; Rattray, N.A.; Flanagan, M.E.; Damschroder, L.; Schmid, A.A.; Damush, T.M. Inside help: An integrative review of champions in healthcare-related implementation. *SAGE Open Med.* **2018**, *6*, 2050312118773261. [CrossRef]