Teamwork in the operating room and anesthesia resuscitation: a cross sectional study at a university hospital

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Abstract:

The aim of this study was to assess the general perception of teamwork, interdisciplinarity and collaboration among teams of operating room and anesthesia-resuscitation teams at an academic hospital in Tunisia.

It's a cross-sectional study conducted over a period of two months in 2019, involves 126 caregivers. The perception of the interdisciplinarity and collaboration of the target teams was evaluated by the IPC65 questionnaire validated in its French version.

In this study, scores of the four dimensions of interdisciplinarity scale, which are normative integration, functional integration, clinical integration and integration of care, do not meet the proposed threshold. Data analysis showed several problematic issues such as meeting management, communication with the administration and other aspects.

Managerial strategies are needed to improve interdisciplinarity and communication within care teams as a result, improving the quality of care but also of improving the well-being at work of hospital staff.

Keywords: Teamwork, Interdisciplinarity, Collaboration, Anesthesia-Resuscitation, Operating Room, IPC65 Questionnaire.

Résumé :

Le but de cette étude était d'évaluer la perception générale du travail d'équipe, de l'interdisciplinarité et de la collaboration entre les équipes de bloc opératoire et les équipes d'anesthésie-réanimation d'un hôpital universitaire en Tunisie.

Il s'agit d'une étude transversale menée sur une période de deux mois en 2019, impliquant 126 personnels de soins. La perception de l'interdisciplinarité et de la collaboration des équipes cibles a été évaluée par le questionnaire IPC65 validé dans sa version française.

Dans cette étude, les scores des quatre dimensions de l'échelle d'interdisciplinarité, qui sont l'intégration normative, l'intégration fonctionnelle, l'intégration clinique et l'intégration des soins, n'atteignent pas le seuil proposé. L'analyse des données a révélé plusieurs problèmes tels que la gestion des réunions, la communication avec l'administration associés à d'autres aspects.

Des stratégies managériales sont nécessaires pour améliorer l'interdisciplinarité et la communication au sein des équipes soignantes en conséquence, améliorer la qualité des soins mais aussi améliorer le bien-être au travail du personnel hospitalier.

Mots clés : Travail d'équipe, Interdisciplinarité, Collaboration, Anesthésie-Réanimation, Bloc opératoire, Questionnaire IPC65.

Background:

The relationship between doctor-nurse represents an elementary node of the interdisciplinarity chain. This collaboration can lead to an improvement in the patient's prognosis, his length of hospital stays, and therefore, a reduction in healthcare costs (Perrier A. 2012).

The team is a group of professionals who are committed to working together around a common patient-centered project. It is made up of professionals with complementary skills that patient needs. (Perrier A. 2012)

Several authors have confirmed the superiority of interdisciplinarity models of cooperation over the classic model on team work. Interdisciplinarity partners have ranked their collective work highly in terms of consistency, responsibility, work climate, internal organization and communication. (Jünger S.2007)

In the United States, an analysis record of six complex operations revealed a communication failure every 8 minutes. Another study reported problems of communication in around 30% of operating room team exchanges, a third of which lead to consequences that threaten patient safety (Weller J, Boyd M. 2014). According to a large scale of European commission, handover communication defects are responsible for 25% to 40% of adverse even. (Flink M et al. 2012)

Further, interdisciplinarity is considered as a protective factor of burnout. The most inductive elements revealing this mental disorder are conflicts at work, poor quality of teamwork, harassment by a superior and fear of making mistakes (Estryn-Behar M. 2012). Therefore, interdisciplinarity could be linked to

organizational wellbeing and commitment of healthcare givers. (ST-Cyr Bouchard, Maude. 2013, Mabry PL. 2008)

"Intensive environments" such as operating room and the reanimation service are places with complex interfaces. The performance and safety of patients depend on the coordination of healthcare operators and their compliance with good among different practices. (ST-Cyr Bouchard, Maude. 2013)

Interdisciplinarity and teamwork in hospitals are the major pillars for improving the quality of care and the culture of healthcare safety. The objective of this study was to assess the level and determinants of cooperation and interdisciplinarity, as well as its difference among healthcare givers employed at the operating room and anesthesia-resuscitation services of an academic hospital in Tunisia.

Participants and methods:

This is a cross-sectional study carried out in the operating room and anesthesia-resuscitation service at an academic hospital in Tunisia during the months of May and June of 2019.

Study population:

The study was exhaustive comprised all medical and paramedical caregivers working during the study period at the operating room and anesthesia-resuscitation services. The only exclusion criterion was trainee students in medicine and paramedical sciences.

Data collection:

In addition to socio-demographic information's (gender, professional category, seniority at work and field of activity), the interdisciplinarity level was evaluated using a validated measuring instrument, which is the IPC65 questionnaire in its French version. This questionnaire was arranged by a multidisciplinary working group in Quebec. It is a self-administered, questionnaire designed to explore the strengths, weaknesses and differences degrees of professional's between team members in healthcare setting. This questionnaire explores the healthcare staff's perception according to 4 dimensions and 65 items. It assesses normative integration (10 items), functional integration (9 questions), clinical integration (26 questions) and integration of care (20 questions) in an interdisciplinarity teamwork context.

- **Normative integration:**

This dimension brings together three axes, namely the

sharing of a common vision, personal and professional commitment to work in interdisciplinarity and the exercise of leadership adapted to the needs of the team.

• **Functional integration:**

This dimension includes administrative support for the interdisciplinarity team and the resources available for the smooth running of the work.

• **Clinical integration:**

This dimension explores the explicit formalization of roles, meeting management, working rules / internal working and mode of conflict resolution.

• **Integration of care:**

this dimension contains three sub-themes: results relating to structure, results relating to the team and results relating to the patient. (Bédard SK. 2013)

The response choices are provided by a Likert scale in order to express the degree of agreement or disagreement (totally agree, somewhat agree, somewhat disagree, totally disagree, not applicable). The final score is the sum of scores of each item, i.e. 3 for totally agrees, 2 for somewhat agree, 1 for somewhat disagree and 0 for totally disagree meaning respectively:

• "A score between 2.5 and 3 indicates a good integration of the concepts leading to an effective interdisciplinarity practice. For an individual item this corresponds to a strong point;

• A score between 2 and 2.5 indicates a fairly good functioning with some elements of improvement to be made after group examination;

• A score between 1 and 2 indicates either marked divergences or several situations that should be examined as a group and potentially corrected;

• A score less than 1 indicates that there are most likely one or more problems to be resolved. For an individual item this corresponds to a weak point. "

Statistical analysis:

To statistical analysis, the software SPSS 11.0 was used. Frequencies and percentages were calculated for qualitative variables, as well as averages, standard deviations, medians for the quantitative variables.

The Khi 2 test was used to assess the influence of professional characteristics on dimensions of IPC65 questionnaire completed with Fisher test if the effectic was less than 3. A significance level ≤ 0.05 was considered.

This study did not raise any particular ethical issues, knowing that anonymity and confidentiality were respected.

Results

The respondents' rate was 34.2% with a predominance of females (90.5 %). Senior technicians represented 42.9% of participants. The majority was affected on operating service (64.3%). (Table 1).

Table1: socio- professional characteristics of participants

		N=42(%)
Profession	Physiciens	19.0
	Senior technicians	42.9
	Nurses	35.7
	Others	2.4
Genre	Female	90.5
	Male	9.5
Service	Operating room	64.3
	Anesthesia-resuscitation	28.6
	Others	7.1
Professionnel seniority	0-5 ans	35.7
	5-10 ans	16.7
	Plus, que 10 ans	47.6

1. Interdisciplinarity assessment (IPC65 Questionnaire*)*

In the current study, 28.6% of participants have had a score between 2 and 3 (Figure 1).

1.1 Normative integration

The mean score for the normative integration dimension was 1.7 ± 0.1 and 64.3% of participants had poor scores (<2).

A quarter of physicians and almost half of the operating room workers had a score ≥ 2. (Table 2)

1.2 Functional integration

The mean score of the functional integration dimension was 1.3 ± 0.1, indicating poor integration. Only 23.8% of respondents had good scores (≥2). (Table 2)

The recognition of the members' effort was underestimated by the administration in 42.9% of cases. Almost half of them admitted that the administration organized training courses for their benefit (52.4%).

Table 2: Mean scores of interdisciplinarity questionnaire (IPC 65) of the studied population	
Normative integration	**1.7±0.1**
Vision	2±0.29
Interest in interdisciplinarity work	1.7±0.14
Leadership	1.5±0.18
Functional integration	**1.3±0.1**
Administrative support	1.2±0.22
Resources available	1.4±0.12
Clinical integration	**1.3±0.06**
Explicit formalization of roles	1.3±0.13
Meeting management:	1.2±0.11
Working rules	1.2±0.1
Internal functioning of work and method of conflict resolution	1.3±0.1
Integration of care	**1.5±0.07**
Results relating to the structure	1.5±0.14
Results relating to the team	1.6±0.13
Patient results	1.5±0.1

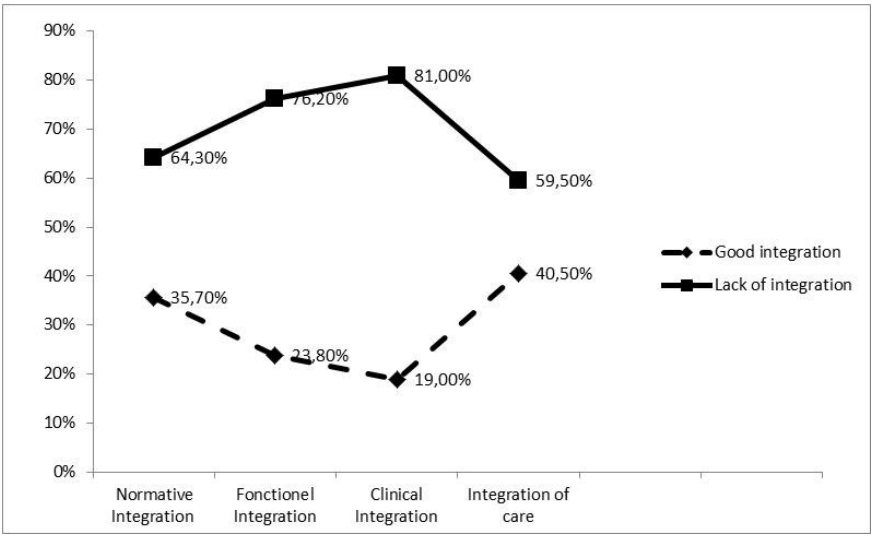

Figure 1: levels of interdisciplinary scores of studied populations

(Lack of integration: score < 2; Good integration: score ≥ 2)

1.3 Clinical integration:

This dimension concerns integration on a functional and organizational level, grouping 4 axes. The average score for clinical integration, in total, was 1.3 ± 0.06. About 24% of

respondents had good scores (≥2).

In this study, 87.5% of physicians and 13% of paramedical staff, having less than five years of professional service, had poor scores.

1.4 Integration of care:

The overall score for the integration of care was 1.5 ± 0.07. This score was low, far from the threshold. Only 23.8% of respondents had good scores (≥2) (Table 2).

2. Influence of professional characteristics on IPC65 questionnaire:

In this study, nurses have had the highest scores of integrations of care, functional and clinical integration compared to physicians and senior technicians. Also, a good integration was noted among participants with a professional seniority between six and ten years.

However, none of interdisciplinarity dimensions was statistically correlated with professional characteristics of the studied population. (Table 3)

Table 3: Professional characteristics and interdisciplinarity dimensions (IPC65)

	Normative integration		Functional integration		Clinical integration		Integration of care (≥2)	
	Score ≥2	P	Score ≥2	p	Score ≥2	p	Score ≥2	p
Profession								**0.3**
Physiciens	25.0%	**0.1**	37.5%	**0.2**	12.5%	**0.6**	37.5%	
senior technicians	**55.6%**		33.3%		22.2%		44.4%	
Nurses	53.3%		**40.0%**		**33.3%**		**46.7%**	
Service								
Operating room	**48.1%**	**0.9**	**37.0%**	**0.9**	18.5%	**0.2**	**44.4%**	**0.5**
Anesthesia-resuscitation	33.3%		25.0%		**25.0%**		33.3%	
Professional seniority	33.3%	**0.6**	26.7%	**0.4**	13.3%	**0.5**	33.3%	**0.9**
0-5 years	**71.4%**		**57.1%**		**57.1%**		**57.1%**	
6-10 years	50.0%		35.0%		20.0%		45.0%	
<10 years								

Discussion:

Medical care provides requires merging of different professional groups into interdisciplinarity teams and sharing information in their activity (Jayasuriya-Illesinghe V. 2016). In this study, only 28.6% of participants have had an overall score ≥ 2 compared to 69% in an equivalent study in Quebec (Poder TG. et al. 2017). Four dimensions were explored to better

identify the level of interdisciplinarity integration among participants.

Normative integration:

Only 35.7% of respondents benefited from good normative integration, compared to 79.3% in the Quebec study IPC59. This dimension is broken down into three dimensions, vision, interest in interdisciplinarity work and leadership. Professional characteristics of studied population have not influenced this dimension of collaborative work. However, the majority of participants share a clear vision for community work. Objectives of the group are based on "working in synergy" in order to provide safe and quality care and on "contributing to the best continuum of care" for patient (Bédard SK. 2013). In a British study, Nancarrow et al. (2013), notes that a clear vision is a good promoter of interdisciplinarity teamwork. It boils down to having a set of values and allows marking a coherent and solid external image. Those results are also reported by some others authors. (Olvera-Calderón J. 2017, Zahreddine J. 2010, Ellemers N. et al. 2013)

Interest in interdisciplinarity work:

In this study, 57.1% of participants appreciated the working in interdisciplinarity. That gives them a sense of belonging and involvement. They will appreciate their roles within an intra-group. Estryn-Behar, (2012) have shown the importance of teamwork: Teams that operate with interdisciplinarity model have had a protective effect; shown by a decrease of the prevalence of burnout among them (5). Ellemers et al. (2013) found that respect and recognition by team members is "critical" in the design of the group's identity. In other scientific studies, the contribution of interdisciplinarity in promoting feelings of belonging and collaboration in the healthcare team is well documented. (Zahreddine J. 2010)

Among the personnel surveyed, 50% perceived the expression of this attitude in their working groups. This mode of governance leads to a proper functioning and achievement of objectives. In addition, it promotes the establishment of a trust climate by encouraging values such as transparency and communication. However, 30.5% of respondents found that medical / clinical-administrative leadership is not applicable. These results can be explained by two main hypotheses. As an interdisciplinarity team, the diversity of disciplines and profiles creates an atmosphere of competitiveness and working in silos. So, leadership is scattered throughout the group since everyone

wants authority under their command. Secondly, the application of leadership in the sense of the word does not exist in the group due to ignorance of the term as well of its role.

In this study, professional characteristics such as professional category and seniority did not influence the normative integration score. This score is lower than the fixed value (> 2).

In order to improve this dimension, we must emphasize the sub-dimensions of interdisciplinarity work and leadership. At the same time, we must further consolidate the vision of objectives.

Functional integration:

The mean score of functional integration was 1.3 ± 0.1, which was judged to be poor. Only 23.8% of participants enjoyed good functional integration. These results revealed the presence of several problems such as ineffective communication with the administration and inefficiency in terms of resource allocation. These difficulties concerned already young and older caregivers, also operating room and anesthesia-resuscitation teams. To better analyze these dysfunctions a participatory and collaborative approach is preconized.

According to 31% of participants the administration does not provided the support to the interdisciplinarity teams and does not recognized their work and their achievements in the way that wish. Indeed, recognition and support is a key lever in the work process, that's supported by Curtis et al. (2006)

In this study, 33.3% of participants were not satisfied with the level of training they had attended. Professionals practicing in intensive care such as the operating room and reanimation service are always struck down by scientific innovations. Consequently, deepening of knowledge is required to promote better safety of care and ensure a good quality of patient care. In Nancarrow et al's study (2013), ten pillars of good interdisciplinarity teamwork were identified, including training professionals and developing skills.

Clinical integration:

Clinical integration concerned the cohesion of individuals from multiple disciplines in the goal of providing global care (Contandriopoulos A-P. 2001). In this work, the score obtained for this dimension was 1.3 ± 0.06, without any statistical correlation with professional characteristics. This score is lower

than the optimal value, considered the lowest compared to other dimensions. In fact, only 19% of respondents profited from good clinical integration.

Scientific studies suggest that formalization of roles must be flexible and extensible in order to allow the exercise of each member of team (17). Nancarrow et al. (2013) reported that autonomy, with regard to decisions, resources and fulfillment of professional roles was considered as protective factors to prevent burnout at workplace. In the current study, less than half of participants report that their professional autonomy is recognized in the team.

Team meetings are a vital part of collaborative work. Regarding this theme, only 35.7% of participants reported the existence of meetings on the operating process, only 38.1% confirmed a regularity of attendance at team meetings, exclusively, 26.2% of meetings are said to be well managed on the preparation and animation level.

The general team relationship and communication represent a challenge of interdisciplinarity work. Dumas et al. (2016), listed different forms of meetings: discussion group, interdisciplinarity group, team meeting, staff, mini staff, communications. These aspects of communications allow sharing and exchange experiences among team workers. They represent institutional opportunities.

In this study, 35.7% of cases expressed a good understanding rules and that mechanisms for continuous improvement of team functioning are used. Chédotel F, Krohmer C. (2014) reported that rules create favorable conditions for managing teams effectively. In this same context, Dumas et al. (2016) attest that operation and organization rules work are elementary to safeguard interdependencies and serve the exchange of medical information.

The current study showed that of 42.5% of participants reported a feeling of subordination of medical colleague and 40.5% consider that in this situation doctors neglect to consider them as full collaborators. This result is reported in the study of Poder et al. (2017), which indicates that 41% (N = 398) of interviewees admit that doctors did not consider all members of the team as collaborators.

The nurse-doctor relationship is influenced by the power of authority, social status, gender and other factors. Communication is likely to be altered or blocked in situations

where there are hierarchical differences between two interlocutors, in particular when a person fears to appear incompetent, does not want to offend the other, or perceives that the other does not is, not open to communication. (Amudha P. et al. 2018, Flin R. et al 2006, Ory L. 2015)

Integration of care:

In this study, the average score for care integration is 1.5 ± 0.07 and 40.5% of respondents enjoyed good care integration, compared to the IPC59 study. In which, it was validated that 76.5% of the sample obtained good scores (Jayasuriya-Illesinghe V. 2016). Half of respondents share that their mode of operation favors the use of tools to assess patients and family needs.

In contrast, assessing patients care needs is an important part of the care process (Flin R. et al. 2006, Ory L. 2015, Gay C. et al. 2017).

In a Soumagne et al. study (2011), a welcome booklet containing a questionnaire was given to patients' relatives to assess them satisfaction about the quality of care.

Another model of patient needs assessment tools is the patient-tracer grid proposed by the French National Authority for Health (2014). Its objectives were "to integrate the patient and his experience as well as that of those close to him in the assessment of care" and to consolidate teamwork. (26)

In the current study, a positive point was added in favor of teamwork and interdisciplinarity: the extension of professional skills, a point validated by 57.1% of respondents. More than half of opinions were in favor of this proposal. In the literature, scientific work describes the concept of "team building" relating to the construction of collective work. It provides all members of the same team with knowledge and attitudes that facilitate exchange information and coordination (Flink M. et al. 2012). According to Sims S. et al. (2014), learning is often produced during team meetings by observing and asking questions of others.

The presence of families promotes communication with the patient and improves the relationship between families and caregivers (28). In our study, 45.2% of the respondents approved the existence of support for the patient and his family.

Scores of interdisciplinarity and communications were below the standard. The opinions of participants were in favor of the importance of a shared vision by team members, the

interest of the interdisciplinarity way of working and the role of the collective in polishing individual skills. These problems were related to communication with the administration, role management, group autonomy, doctor-nurse relationship and support for the patient and his family.

Although this study is exhaustive, certain limits deserve to be pointed out. Data collection was based on a survey form developed and completed by a single interviewer. This tool, widely applied in epidemiological studies, is known to be a source of several biases, such as recall bias. The response rate of medical personnel is low, an obstacle frequently observed in scientific studies carried out on the working conditions (Durand-Gasselin J. 2010). The large number of items corresponding to 65 can cause abstinence from responding in inquiries because of the time set up and the length of the questionnaire (Aaberg OR. et al. 2019). Certain points are not assessed such as the management of adverse events, stress and burnout. Indeed, some socio-professional determinants could interfere with the concept of interdisciplinarity among hospital caregivers.

Conclusion:

This survey represents a scientific reference to hospital manager and decision makers. The results of this study were not formal to those desired.

We noted that all the scores were below the standard suggested by the questionnaire. It supports management to optimize these two specialties and others in order to improve the quality of care and plan for an accreditation project. Operating room and anesthesia-resuscitation present a strong financial, organizational and human relations management challenge. They are decisive places for the quality of care, places for teamwork and collaboration and confrontation of highly specialized human skills, places of innovation and major cost centers. So that, it is necessary to put in place strategies to improve interdisciplinarity and communication within healthcare teams and by the same token, patient safety

The normative integration and integration of care dimensions are the best, unlike the scores for clinical integration, which is the lowest, as well as that for functional integration.

The opinions of the participants were in favor of the importance of a common vision shared by all members, the interest of the interdisciplinary working method and the role of

the collective in polishing individual skills. Communication with the administration, role management, autonomy in the group, the doctor-nurse relationship and support for the patient and his family are the main problems.

It seems that there must be discussion meetings in order to discern anomalies. Moreover, the results observed in this work are debatable like any scientific work. In this context, other types of cooperation currently exist, including "Networking", a principle that was born following the generalization of the computerized patient file which moves away from the traditional concept of collaboration.

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Declaration of interest:

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

References :

1. Aaberg, OR., Hall-Lord, M.L., Husebø SIE, Ballangrud R. (2019) Collaboration and atisfaction About Care Decisions in Team questionnaire—Psychometric testing of the Norwegian version, and hospital healthcare personnel perceptions across hospital units. Nurs Open.;6 (2):642-50.
2. Amudha, P., Hamidah, H., Annamma, K., Ananth, N. (2018) Effective Communication between Nurses and Doctors: Barriers as Perceived by Nurses. J Nurs Care; 7: 455. doi:10.4172/2167-1168.1000455
3. Bédard, SK., Poder, TG., Larivière, C. (2013) Processus de validation du questionnaire IPC65 : un outil de mesure de l'interdisciplinarité en pratique clinique. Santé Publique; 25(6):763-773
4. Chédotel, F., Krohmer, C. (2014) Les règles, leviers de développement d'une compétence collective – deux études de cas. @GRH ; 3 (12) : 15-38. doi : 10.3917/grh.012.0015. [cited 2019 Dec 22]. Available from: https://www.cairn.info/revue-@grh-2014-3-page-15.htm.
5. Contandriopoulos, A-P., Denis, J-L., Touati, N., Rodriguez, R. (2001) Intégration des soins : dimensions et mise en œuvre. Rupture, revue transdisciplinaire en santé;8 (2) :38-52.
6. Curtis, J.R., Cook, D.J., Wall, R.J., Angus, D.C., Bion, J., Kacmarek, R., et al. (2006) Intensive care unit quality improvement: A "how-to" guide for the interdisciplinary team*: Crit Care Med. 34(1):211-8.
7. Dumas, M., Douguet, F., Fahmi, Y. (2016) « Le bon fonctionnement des services de soins : ce qui fait équipe ? ». RIMHE : Revue Interdisciplinaire Management, Homme & Entreprise ; 1 (20) : 45-67. doi : 10.3917/rimhe.020.0045. [cited 2019 Dec 15]. Available from: URL : https://www.cairn.info/revue-rimhe-2016-1-page-45.htm.
8. Durand-Gasselin, J. (2010) Quelle place pour les familles en réanimation ?

Réanimation; 19 (3):258-64.
9. Ellemers, N., Sleebos, E., Stam, D., de Gilder, D. (2013) Feeling Included and Valued: How Perceived Respect Affects Positive Team Identity and Willingness to Invest in the Team: Effects of respect: feeling included and valued. Br J Manag.; 24(1):21-37.
10. Estryn-Behar, M., Lassaunière, J-M., Fry, C., de Bonnières A. (2012) L'interdisciplinarité diminue-t-elle la souffrance au travail ? Comparaison entre soignants de toutes spécialités (médecins et infirmiers) avec ceux exerçant en soins palliatifs, en onco-hématologie et en gériatrie. Médecine Palliat Soins Support - Accompagnement – Éthique;11(2):65-89.
11. Flink, M., Öhlén, G., Hansagi, H., et al. (2012) Beliefs and experiences can influence patient participation in handover between primary and secondary care—a qualitative study of patient perspectives. BMJ Quality & Safety;21:i76-i83.
12. Flin, R., Yule, S., McKenzie, L., Paterson-Brown, S., Maran, N. (2006) Attitudes to teamwork and safety in the operating theatre. The Surgeon; 4(3): 145-51.
13. Gay, C., De Lapparent, T., Petit, E. (2017) Accompagner « debout » les patients au bloc opératoire pour opérer une personne et pas un organe. Risques & Qualité; 3: 151-154. doi: 10.25329/rq_xiv_3-3.
14. Jayasuriya-Illesinghe, V., Guruge, S., Gamage, B., Espin, S. (2016) Interprofessional work in operating rooms: a qualitative study from Sri Lanka. BMC Surg BMC Surg.; 16(1): 61. doi: 10.1186/s12893-016-0177-7Jünger S, Pestinger M, Elsner F, Krumm N, Radbruch L. Criteria for successful multiprofessional cooperation in palliative care teams. Palliat Med. juin 2007; 21 (4):347-54
15. Kristiina, H., Kaija, S. (2010) Patients' Needs Assessment Documentation in Multidisciplinary Electronic Health Records. Stud Health Technol Inform.; 269–73.
16. Le patient-traceur en établissement de santé. Méthode d'amélioration de la qualité et de la sécurité des soins (2014) Guide méthodologique Saint-Denis La Plaine : HAS. [cited 2019 Nov 22]. Available from: http://www.has-sante.fr.
17. Lo, L. (2011) Le travail d'équipe et la communication dans les soins de santé: une analyse documentaire. Edmonton: Institut canadien pour la sécurité des patients [cited 2019 Dec 6]. Available from: https://www.patientsafetyinstitute.ca/fr/toolsresources/teamworkCommunication/Documents/Canadian%20Framework%20for%20Teamwork%20and%20Communications%20Lit%20Review.pdf
18. Mabry, P.L., Olster, D.H., Morgan, G.D., Abrams, D.B. (2008) Interdisciplinarity and systems science to improve population health: a view from the NIH Office of Behavioral and Social Sciences Research. Am J Prev Med. 2008 Aug;35(2 Suppl):S211-24. Am J Prev Med.;35(6):611. PMID: 18619402; PMCID: PMC2587290.
19. Nancarrow, S.A., Booth, A., Ariss, S., Smith, T., Enderby, P., Roots, A. (2013) Ten principles of good interdisciplinary team work. Hum Resour Health.; 10 (11):19. doi: 10.1186/1478-4491-11-19.
20. Olvera-Calderón, J., LLorens-Gumbau, S., Acosta-Antognoni, H., Salanova-Soria M. (2017) El liderazgo transformacional y la confianza como antecedentes del desempeño en equipo en el ámbito sanitario. Anales de psicología, 33 (2) : 365-375. http://dx.doi.org/10.6018/analesps.33.2.237291
21. Ory, L. (2015) Quid de la satisfaction des patients sur la prise en charge anesthésique en chirurgie ambulatoire ? Enquête au CHU de Poitiers. Mémoire professionnel En vue de l'obtention du diplôme d'Etat d'infirmier anesthésiste. École régionale d'infirmier(e)s anesthésistes diplôme(e)s d'état. Septembre [cited 2019 Dec 6]. Available from: http://www.chu-

poitiers.fr.
22. Perrier, A. (2005) Collaboration infirmières-médecins : Un déterminant de la qualité des soins ? Rev Med Suisse;1:2742-5.
23. Poder, T.G., Carrier, N., Bédard, S.K. (2017) Interdisciplinarity in clinical practice in Quebec: Results of a survey with IPC59 [Internet]. International Journal of Hospital Based Health Technology Assessment; 1:3-11. doi: 10.21965/IJHBHTA.2017.001
24. Poder, T.G., Carrier, N., Bédard, S.K. (2018) Measuring interdisciplinarity in clinical practice with IPC59, a modified and improved version of IPC65. Van Bogaert P, éditeur. PLOS ONE.;13(7):e0197484.
25. Projet IPSPL.info (2019) La définition des rôles, un élément indispensable de l'intégration des IPSPL. [cited 2019 Dec 1]. Available from: http://www.ipspl.info/defnRoles.html
26. Sims, S., Hewitt, G., & Harris, R. (2014). Evidence of collaboration, pooling of resources, learning and role blurring in interprofessional healthcare teams: a realist synthesis. Journal of Interprofessional Care; 29(1) : 20–25. doi:10.3109/13561820.2014.939745.
27. Soumagne, N., Levrat, Q., Frasca, D., Dahyot, C., Pinsard, M., Debaene, B., & Mimoz, O. (2011) Enquête de satisfaction de familles de patients hospitalisés en réanimation. Annales Françaises d'Anesthésie et de Réanimation, 30(12), 894–898. doi: 10.1016/j.annfar.2011.05.015.
28. ST-Cyr Bouchard, Maude (2013) Les équipes de travail interdisciplinaires : regard sur les facteurs d'une réussite.
29. Weller, J., Boyd, M. (2014) Making a Difference through Improving Teamwork in the Operating Room: A Systematic Review of the Evidence on What Works. Curr Anesthesiol Rep., 4(2):77-83.
30. Zahreddine, J. (2010) Exploration de la perception de l'interdisciplinarité de la part des infirmières en milieu gériatrique. Mémoire présenté à la Faculté des études supérieures et postdoctorales en vue de l'obtention du grade de maîtrise individualisée (M. Sc.) option vieillissement, santé et société Mars 2010, Université Montréal; Jouhayna Zahreddine, 2010. [cited 2019 Nov 6]. Available from: https://papyrus.bib.umontreal.ca/xmlui/bitstream/handle/1866/4104/Zahreddine_Jouhayna_2010_memoire.pdf?sequence=2&isAllowed=y