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INPROF – Promoting Teamwork Processes and Interprofessional Collaboration in Emergency Work (2010–2012)

Abstract

This paper summarises the findings of a research project on interprofessional collaboration in the emergency unit of a major Finnish hospital. The findings are discussed through a broad conceptual framework which involves work process knowledge and interprofessional collaboration. The project, carried out from 2010–2012, investigated different forms of, prerequisites for, and barriers to, collaboration, and the aim was to develop the work together with staff at the unit. An ethnographically informed research strategy was utilised, with observations and interviews as the main data collection methods. On the whole, collaboration in the emergency unit was found to function rather well; i.e. patients receive good-quality treatment within the ideal time frame. We found that in the unit, the most suitable form for the majority of collaborations is multi-professional collaboration, in which professionals exchange information but still adhere strongly to their own professional groups. More interprofessional collaboration is required particularly in leadership and management, to create further improvements in i) the coordination of work as a whole, and ii) the implementation of organisational changes and new professional roles. Obstacles to interprofessional collaboration in particular appear to be: i) diverging professional values and core professional identities, and ii) power relations that create inequality.

Keywords: interprofessional collaboration, work process knowledge, ethnography, emergency work, workplace learning.

Introduction

Contemporary emergency work is a fragmented field. Responsibility for work has often lain in the hands of medical specialities (surgery, neurology, internal medicine etc.), and comprehensive patient care is usually challenging and time-consuming. Holistic patient care, a customer-oriented approach, cost-effectiveness and increased quality of care all contribute to the need, however, for interprofessional collaboration (Baker, Day and Salas 2006; D'Amour, Ferrada-Videla, San Martín-Rodríguez and Beaulieu 2005; Pollard, Sellman and Senior 2005). Emergency work can be seen as an environment in which interprofessional teamwork and learning are essential to securing and developing patient safety and effective practice (McCallin 2001; Nembhard and Edmondson 2006).

The requirements and challenges within interprofessional collaboration vary depending on the operational environment. The environment (e.g. emergency duty) is challenged continuously by changes in the composition of care groups and employees doing three-shift and emergency-natured work (Rekola, Isoherranen and Koponen 2005). In everyday critical and busy situations, all workers need to know their duties and be able to trust each other's competence. At times, collaboration between experts in different specialities can be dynamic, but it is often situation-specific. It is also often difficult to find time and space for interprofessional collaboration and discussion. Therefore, it is important that everyone understands work processes in the same way and that communication between people is fluent (Pullon 2008). Further, organisational structures constitute a challenge in that they do not support shared knowledge and a joint-operating model. The conventional medical model applauds autonomy and individualism and is a top-down or hierarchical control model, focusing on technical expertise and neglecting the non-technical capabilities that are central to interprofessional work (see Lingard, Espin, Evans and Hawryluck 2004).

Despite enduring academic discussions about multi-professionalism, teamwork and the effectiveness of health care work, we still know relatively little about functional work between

1 professional groups (Pollard, Sellman and Senior 2005) and collaborative processes in emergency
2 work (Lemieux-Charles and McGuire 2006). Further, although the challenges within, and
3 constraints upon, interprofessional collaboration in health care have been analyzed (e.g. Ramanujam
4 and Rousseau 2006), only a small number of studies have concentrated on operational processes
5 (Collin, Paloniemi and Mecklin 2010). This research aims to contribute towards filling these gaps.
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8 This paper summarises and discusses the main findings of a research project on interprofessional
9 collaboration at the emergency unit of a major Finnish hospital. We will utilise a broad conceptual
10 framework which is informed, firstly, by *work process knowledge* (see Boreham 2004). The idea of
11 work process knowledge suggests that all employees should understand their work in a holistic way,
12 as a series of parts in one set of processes. It manifests in active and practical knowledge embedded
13 in work practices and is most typically used in different kinds of problem-solving situations.
14 Secondly, *interprofessional collaboration* is framed here as an ideal, denoting a combination of
15 know-how and expertise from different professional domains in a work community or a working
16 group (Housley 2003). In this paper, we will offer a critical investigation of these two concepts. Our
17 focus on interprofessional collaboration derives from a socio-cultural understanding of learning
18 (Wenger 1998). As many of the obstacles for learning in organisations (including health care
19 organisations) have been found to be social in nature (Collin, Paloniemi, Virtanen and Eteläpelto
20 2008), we place a strong emphasis on the participatory nature of learning in work communities.
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23 ***Promoting teamwork processes and interprofessional collaboration in emergency work – the*** 24 ***INPROF research project*** 25 26

27 The INPROF research project was conducted during the years 2010–2012 in collaboration with
28 Central Finland Central Hospital and the Department of Education, University of Jyväskylä. The
29 emergency unit in question has been disclosed in research publications, based on a mutual
30 agreement. By working in collaboration with emergency unit staff, the project aimed to investigate
31 both those work processes that function well and those that might need development. The ultimate
32 goal was to develop solutions for promoting interprofessional sharing of expertise in the emergency
33 unit. In the investigation and development of team processes and interprofessional collaboration,
34 issues such as division of work, organising work practices, sharing expertise, learning and
35 interaction were taken into account. Ethnography offered a methodological approach (Hammersley
36 and Atkinson 2007) that allowed the emphasis of collaborative practices and requirements, as well
37 as their possibilities and challenges, within emergency work practices.
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40 More specifically, we asked:
41

- 42 i) What kinds of forms of collaboration exist in the practices of the emergency unit staff?
- 43 ii) How do work process knowledge and interprofessional collaboration manifest themselves in
44 the work of the emergency unit staff?
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47 The project was divided into three phases. Firstly, we mapped the central procedures and practices
48 in interprofessional collaboration within the emergency unit. The aim of the first phase was to
49 collaborate with staff to create an understanding of their work practices and developmental needs.
50 Developmental plans and efforts were guided by the idea that improvement evolves from existing
51 good practices, as well as from the recognition of challenges, opportunities and staff needs (e.g.
52 Collin, Valleala, Herranen and Paloniemi 2012). The second phase concentrated on exploring
53 research-based practical solutions to developmental needs. The researchers acted as facilitators and
54 ‘mirrors’ by introducing research findings on processes that might require development and by
55 arranging forums together with the staff (e.g. development days) to promote mutual discussion on
56 central topics. During this phase of the project, major changes in emergency work actions took
57 place outside of the INPROF activities. Thus, the themes of interest in many of the developmental
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1 efforts focusing on interprofessional collaboration were defined by the emergency unit staff
2 members themselves.
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5 For the third work phase, we set a goal of building a model of shared expertise that could also be
6 applied in other similar contexts (e.g. in acute care in general). However, during the project, it
7 became evident that this was neither possible nor useful. Due to the nature of emergency work (and
8 hospital work more generally), the context-specific work environments and the fairly short duration
9 of the project, constructing one single model for varying work processes was not seen as feasible. It
10 was not possible to capture the diversity and the multifaceted nature of different work environments
11 and situations with the help of one general collaborative model, especially in such a short time
12 frame; attempts at building such a model would require more long-term research in a given context
13 and, due to the complexity of work environments, the model would be applicable mostly in similar
14 contexts, not necessarily in all work contexts. We argue for more local and context-specific research
15 in order to build an applicable model. This context-specific research should be conducted within
16 various contexts to facilitate the generation of a widely applicable model.
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20 **Context and Research Methods**

21 *Emergency work at Central Finland Central Hospital*

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23 At the time of the study, the emergency unit at Central Finland Central Hospital consists of an
24 emergency clinic and an emergency and infection ward (EIW). The number of staff is between 170
25 and 200, not including itinerants from other hospital units. Since the year 2008, the emergency unit
26 has functioned administratively as an independent unit in the hospital, taking care of primary and
27 special health care on-duty responsibilities in the region. The emergency unit functions in a recently
28 constructed building and in 2011, there were approximately 90,000 patient visits.
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33 The aims of the *emergency clinic* are: fast and effective diagnosis, commencement of treatment,
34 definition of needs and placement for further treatment. The goal is that at least 80 per cent of
35 patients should be treated within two hours. The unit is divided into two sections: one for primary
36 health care and the other for special health care. The special health care section is divided further
37 into four smaller units for conservative, operative, children's and emergency care (trauma room). In
38 addition, nurses work on a triage system (which is the process of determining the priority of a
39 patient's treatment on the basis of the severity of their condition).
40

41
42 The idea of the *EIW* is to treat emergency conditions that need longer treatment than that which the
43 emergency clinic provides. Patients are admitted and then sent on to further treatment, or sent home.
44 The aim is for patients to stay in the EIW for no longer than two days. The vast majority of patients
45 are transferred to the EIW from the emergency clinic. Therefore, these two units work in close and
46 continuous collaboration.
47

48
49 Work at the emergency unit is hectic, requiring rapid decision-making and fluency in work
50 processes. In addition, the composition of the care groups is subject to frequent change. The staff
51 needs to take care of patients with various diseases, a goal which requires more ability to answer to
52 patients' needs collaboratively, share expertise, understand work processes as a whole and react
53 quickly in changing situations. Thus, the development of emergency care processes and
54 interprofessional collaboration has been seen as vital in the organisation and more broadly.
55

56 *Ethnographic approach as a research strategy*

1 The foci of this study – teamwork processes and interprofessional collaboration – are best
2 approached via methods which enable observations of authentic everyday work practices and
3 interactions. Therefore, our methodological approach was informed by ethnography (Hammersley
4 and Atkinson 2007). Utilising ethnography enabled us to gain a multifaceted understanding of the
5 research context (particularly in phase one), which, as we seek to demonstrate, is also a vital
6 condition for developmental efforts. Later on in phases one and two, participatory planning of
7 developmental actions was implemented in the spirit of collective ethnography: the emergency unit
8 staff and the steering group of the project actualised these development efforts together.
9 Responsibility for communicating the findings was placed on both the researchers and the staff.
10 Ethnography and collective ethnography (Paloniemi and Collin 2010a; Gordon et al. 2006; Sigaud
11 2008; Woods et al. 2000) not only enable a better understanding of the research context but also
12 facilitate the close investigation of interactions among staff at grass-roots level. Ethnography can
13 also be applied effectively to the hectic work in the emergency unit as it enables quick reactions to
14 changes in the unit when necessary. Collaboration between a total of four researchers was utilised in
15 the project.
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19 Permissions for the research were granted by the ethical boards of both the hospital and the
20 university. Consequently, ethical guidelines for research were followed carefully. The research did
21 not focus on patients during any phase. The emergency unit staff was informed clearly about the
22 research before the field work commenced. Further, during field work observations, the project, its
23 aims and its practices were discussed.
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26 The main data collection devices comprised of observations and interviews. First of all,
27 observations were collected about everyday work in the emergency unit through the researchers’
28 field diaries, and via audio-recorded discussions between staff members themselves and between
29 the researchers and staff in different situations in which interprofessional collaboration may take
30 place. Observational data was also collected via the shadowing of employees. We also utilised
31 various documents as research data (e.g. available statistics, reports and other official documents),
32 as well as making observations in staff meetings. The analysis comprised of various qualitative
33 analytical devices, such as content analysis and thematic analysis (Braun and Clarke 2006). At least
34 two researchers were always present during the data collection, and the data was analysed
35 collaboratively by all the researchers. Methodological choices are explained more thoroughly in the
36 project publications described in Table 1. After the collection and analysis of the research data, we
37 proceeded to develop the work practices of the emergency unit, together with the staff. Thus, our
38 research findings served as a support to developmental efforts.
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42 The following Table 1 presents the phenomena under study during the research project. Further, it
43 describes the reasons why these phenomena were studied and the papers in which the findings are
44 reported more closely.
45

46 [Table 1 here]
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49 Findings

50 In the project, three forms of collaboration were found in the emergency unit, one of which can be
51 classed as multi-professional and two as interprofessional: i) multi-professional involvement with
52 the chain of treatment, representing the ‘traditional’ division of work, where all the professional
53 groups realised their established, pre-assigned duties – they worked side by side and delivered
54 information to each other, but still held firmly to their own professional groups, ii) mutual planning
55 of patient care, and iii) treatment of particular patient groups, e.g. substance abusers or psychiatric
56 patients. Each form of collaboration also included particular challenges, for example: deficiencies in
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1 the flow of information and inconsistent practices (multi-professional work), interaction in rigid
2 hospital hierarchies (planning of care), and orientation and advising of new employees in constantly
3 changing circumstances (treatment of particular patient groups). Our study showed that, although
4 hospitals are challenging contexts for learning, the possibility for learning is present in several
5 ways. We found that individual-level learning is the most common kind of learning in everyday
6 patient care situations. Team learning is, however, more challenging and requires different kinds of
7 boundary-crossing and even the removal of professional boundaries. The role of nurses may be
8 decisive in interprofessional collaboration and learning, especially if they are recognised as having
9 tasks and responsibilities that they perform independently during patient care, as in the example of
10 triage (for further details, see Collin et al. 2012).

13
14 During the INPROF research project, the most significant change (unrelated to the research project)
15 in the Central Finland Central Hospital emergency unit was a substantial increase in patient volume.
16 This increase occurred due to the expansion of the regional night-time emergency services, and
17 caused the need for several modifications in the unit's action models. As the change was
18 investigated during the INPROF project, the importance of participation for learning within change
19 was confirmed. Further, participation manifested itself as a more multifaceted phenomenon than it
20 has been considered in previous studies (e.g. López, Peón and Ordás 2006; Bess, Perkins, Cooper
21 and Jones 2011). Employee participation in the change was characterised by connections between
22 organisational and individual levels in terms of i) structures and practices provided by the
23 organisation that facilitated employee participation, such as regular meetings open to the entire staff
24 or open discussions, and ii) the nature of participation within these structures and practices as
25 chosen by individual employees. Participation opportunities for the staff in i) planning and decision-
26 making, ii) identity work and iii) training before and during the implementation of new practices
27 were found to be critical terms of individual-level learning opportunities within organisational
28 change. These participation opportunities did not materialise sufficiently in this case and we suggest
29 that these aspects require more attention within the process of executing organisational changes and
30 in organisational development. Although employees were not included in decision-making in the
31 planning of the change, employee participation increased organisation-level learning opportunities
32 in the form of expressing work-related problems (Valleala, Herranen, Collin and Paloniemi, in
33 press).

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37 As part of the above-mentioned organisational change, the role of chief duty nurses (shift-specific
38 leaders of nursing) was modified. The work of chief duty nurses was also studied in this project and
39 was found to comprise of tasks such as coordination, clinical work, advising, problem-solving and
40 motivating colleagues; there were differences, however, between various staff members in their
41 perceptions and undertaking of these duties. The main issues that were found to relate to this newly
42 modified work role focused, firstly, on how the role and tasks of chief duty nurse were perceived by
43 the chief duty nurses themselves on one hand, and how they were viewed by the rest of the work
44 community on the other, e.g. some staff members not entirely understanding or accepting the
45 higher-status nursing role. Secondly, there were discrepancies in practicing chief duty nursing; for
46 instance, the 'amount' of participation in routine clinical work by chief duty nurses, and their
47 diligence in circulating and monitoring the clinic. Thirdly, negotiations of power, both official and
48 unofficial, were found to be a central issue. Our empirical data suggests that the new position could
49 be problematic in terms of gaining the respect of colleagues and that this respect, or a lack of it,
50 may also relate to personal characteristics. Our research showed that negotiations of professional
51 identity amid changes in work roles should be understood not only as individual processes, but also
52 as social negotiations taking place across the entire work community. Further, our study illustrated
53 the complexities involved in the professional identity negotiations by which the new position of
54 chief duty nurses was constructed. For an individual nurse, the challenge arising from alternating
55 between the positions of chief duty nurse and care group nurse relates to finding meaningfulness in
56 the new duties at hand. For the nursing community, the challenge lies in negotiating a legitimate
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2 position for the new division of work in the context of an emergency clinic (Paloniemi, Valleala,
3 Collin and Herranen, forthcoming).
4

5 Figure 1 depicts and summarises the main themes and findings of the INPROF project. Some of the
6 themes were included in the project to begin with, whereas some emerged, in the spirit of
7 ethnography, as the project advanced.
8

9
10 [Figure 1 here]
11

12 13 **Discussion**

14
15 Overall, the INPROF research project provided new knowledge on operational processes, the
16 collaboration of different professionals, and learning in emergency work (see Pollard, Sellman and
17 Senior 2005; Lemieux-Charles and McGuire 2006) – areas that have, to date, received fairly little
18 attention in research. On the whole, collaboration in the emergency unit was found to function
19 rather well; i.e. patients received good-quality treatment within the ideal time frame (Collin et al.
20 2012). Many of the operational processes were, however, still taking shape. In the following
21 sections, we will discuss our findings more thoroughly.
22

23 24 *Work Process Knowledge*

25
26 Previous research has argued that it is vital that all employees should understand their work in a
27 holistic way, as a series of parts in one set of processes (Boreham 2004; Pullon 2008) and that the
28 communication is fluent (Pullon 2008), both of which are conditions that materialised only partly in
29 the unit studied here. We observed that hospital hierarchies (as discussed by Lingard and
30 colleagues, 2004), and divergent administrative bodies in different professional groups (especially
31 those of nursing and medicine) complicated the perception of overall processes in the work. Based
32 on our interpretations, different professional groups have differing understandings of work
33 processes, as has also been noted by Copnell et al. (2003) and Krogstad, Hofoss and Hjortdal
34 (2004). The various professional groups value their own concerns and thus pay attention to different
35 parts of processes. A fairly typical problem from the viewpoint of nurses and secretaries, related to
36 the deficient flow of information and inconsistent practices mentioned earlier, was that of doctors'
37 entries being missing from transfer documents concerning patients' subsequent treatment. These
38 entries, which may seem rather marginal in terms of doctors' work as a whole, are of indispensable
39 importance to nurses and secretaries, who can advance treatment processes on the doctors' behalf.
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42
43 Decision-making in earlier phases of work processes (e.g. doctors at the emergency clinic deciding
44 to transfer patients to the EIW) is crucial in terms of the success of other actors' overall processes
45 (e.g. staff on the EIW), yet the matter is not straightforward. Patient transfers are an example of an
46 issue that polarises views and reflects the complexity of reconciling different professional opinions
47 and processes: on one hand, the emergency clinic – even in its architectural solutions – aims at the
48 commencement of treatment and at fast transfers to other units; backlogs, therefore, are a major
49 challenge that the clinic attempts to evade. On the other hand, the EIW might already be too full or
50 constantly receive 'wrong' patients, e.g. those in need of more long-term treatment. At the same
51 time, as evidenced by quotes from several staff members in our data ("we're here for patients",
52 "patients are number one priority"), good-quality care and treatment obligation are acknowledged
53 and valued in both units.
54

55
56 Work process knowledge in work communities is seen characteristically as being separate from its
57 actors; as belonging mainly to managers and supervisors and as being subject to external
58 coordination and control (Järvensivu 2007). In practice, this sometimes manifests itself in one
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1 professional not even attempting to understand the viewpoint of the other professional. A shared
2 perception of overall care processes presupposes discussion and the participation of the entire staff,
3 as well as an understanding of one another's work. In general, understanding of work processes as a
4 whole seems to be relatively congruent among all the professional groups. However, we observed
5 that there were differences in understandings of work processes based on how one's professional
6 interest and contribution is focused and what (s)he finds important in his/her work. A pivotal
7 question, therefore, is: *to what extent should understandings of work process knowledge be*
8 *congruent, and to what extent can they diverge from each other without disturbing the fluency of*
9 *work practices?* In order for the core processes of overall care to be perceived similarly by all the
10 professional groups, strong leadership and coordination of collaboration are also needed.

14 ***The realisation of interprofessional collaboration in the emergency unit***

16 In this project, interprofessional collaboration was approached as an ideal procedure, as defined by
17 the behavioural sciences. In scholarly literature, interprofessionalism is seen as counterbalancing
18 the fragmentation of science and professional practices (e.g. Bleakley et al. 2006). The biggest
19 obstacles to the realisation of interprofessional collaboration have been found to be organisational
20 in nature rather than clinical or related to the actors' know-how (Ramanujam and Rousseau 2006;
21 Isoherranen 2012). In health care organisations, these kinds of obstacles include i) a hierarchical
22 structure that prevents democratic action, particularly in stressful situations, ii) a deficient flow of
23 information between professional groups at different levels of the hierarchy and iii) the divergent
24 statuses and positions of professional groups, which makes dialogue between different professional
25 groups difficult (Nembhard and Edmondson 2006). Furthermore, research has identified the
26 following factors that promote interprofessionalism: opportunities for collegial support, an
27 understanding of group members' roles and overall processes, and a comfortable work atmosphere
28 (e.g. Collin, Paloniemi and Mecklin 2010). According to the insights of the INPROF project, these
29 prerequisites for, and obstacles to, interprofessional collaboration are also present in the work of the
30 emergency unit.

34 We found that the majority of medical emergency work in the unit studied here can be carried out
35 most suitably via multi-professional collaboration. Interprofessional collaboration and boundary-
36 crossing between professional groups (e.g. Akkerman and Bakker 2011; Fenwick 2006) seem to
37 occur in the ideal form described above both in the most fast-paced and challenging clinical
38 situations (e.g. with an emergency patient in the trauma room) and in certain smaller manifestations,
39 such as in mutual care planning or the treatment of particular patient groups (Collin et al. 2012).
40 Successful medical emergency work does not seem to presuppose continuous joint planning in line
41 with the ideals of interprofessionalism and shared expertise. Therefore, maintaining
42 interprofessional practice as such is not essential but, rather, it is important to find those points of
43 collaboration where more interprofessionalism would improve the overall functionality of the work.

46 Why, then, does interprofessional collaboration seem to function particularly in the most
47 challenging clinical situations? Several previous studies (e.g. Copnell et al. 2003; Krogstad, Hofoss
48 and Hjortdal 2004) have, in accordance with the findings of the INPROF project, argued that
49 different professional groups have divergent understandings of each other's roles and of what is
50 expected of individuals acting in different roles. Apparently, in mundane and non-urgent emergency
51 work, there is no profound, situational demand for interprofessionalism; here, multi-professional
52 collaboration is adequate. In real emergency situations and other demanding or problematic patient
53 cases, however, professional experience and know-how are perhaps more valuable than professional
54 hierarchies at certain points of the treatment process. In addition, training for exceptional situations
55 is arranged regularly, indicating that professionals come together regularly to discuss and learn
56 about each other's roles. Actions in challenging care situations thus appear, at least outwardly, to be
57 interprofessional and mutually shared.

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3 Interprofessional collaboration is not only a question of sharing and combining know-how,
4 competence and expertise for organisational processes as a whole (*what* one does). In addition, the
5 nature of professional collaboration and work cultures has a role: to exercise and develop
6 interprofessionalism, it is important that collaboration occurs via humane interaction in a group
7 (*how* one acts). Here, *leadership and management* play a crucial role. For example, the
8 development of emergency work as a whole demands greater collaboration between chief doctors
9 and nurses. Although multi-professional collaboration appears to be the most adequate form of
10 collaboration in mundane emergency work, stronger interprofessionalism in leadership and
11 management would perhaps also become manifest in the everyday work of all staff members due to
12 improvements to the consistency of instructions, work practices and the flow of information –
13 aspects which this project has found to be central challenges within emergency health care at
14 present. Such overall consistency in functions and guidelines would facilitate the interaction of
15 professionals in hectic care situations.
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19 The different cultures and *professional identities* within the various professional groups also offer
20 fruitful perspectives for investigating collaboration. Despite the professional groups' shared
21 ultimate aim of efficient patient care, the core identities of different professional practitioners seem
22 to rest upon dissimilar values, as linked with the historical formation of these roles (for example, the
23 importance, for doctors, of finding a medical solution and, for nurses, of delivering comprehensive
24 patient care). The core qualities of professional identities are solid, but there are also aspects to
25 these roles that are ever-changing and are (re)negotiated situationally, relative to other actors in the
26 work community or in the organisation more broadly (Paloniemi et al. forthcoming). An example of
27 the social nature of professional identity is the introduction of the modified chief duty nurse system
28 in the emergency unit, as discussed above. The nursing community was not used to 'hybrid roles
29 with changing power positions' (basic nursing vs. shift-specific leading of nursing), which
30 manifested itself as constant negotiations and tensions on the new role in the everyday work.
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33 The organisational change studied here also evidenced how important it is to make sure that the
34 whole staff can *participate* in the change process, especially at its most critical points (Valleala et al.
35 in press). Moreover, a new system must be monitored and controlled before it can be applied in
36 other contexts. In the case of the chief duty nurse system, collaboration with chief doctors was not
37 utilised sufficiently; the system was planned and put into practice mostly from the perspective of
38 the nurses' work. A stronger emphasis on interprofessional collaboration might have aided the
39 implementation of the change process and change-related learning.
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42 In addition to the obstacles presented above, *power relations* (official and unofficial) are one of the
43 biggest barriers to interprofessional collaboration. For instance, if one group of professionals has
44 more power than the other groups in the work community, it is clear that collaboration cannot
45 materialise in an ideal and democratic way (see Collin et al. 2011). Moreover, traditional power
46 structures do not sit well with the ideas of work process knowledge and interprofessionalism that
47 emphasise e.g. dynamicity and low professional boundaries.
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50 51 **Conclusions**

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53 Central to work process knowledge is the idea of perceiving the sum total of the work of a unit from
54 the genuine viewpoint of different actors (Järvensivu 2007). This is best actualised in
55 interprofessional collaboration, where perceptions, experience and know-how of different
56 professionals are obviously combined (Housley 2003), as opposed to multi-professional
57 collaboration, where professionals exchange information but still adhere strongly to their own
58 professional groups. Interprofessional collaboration does not exist, nor is it needed, in every phase
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1 of medical emergency work; instead, it is embedded partially and situationally in different contexts,
2 structures and practices. Thus, the arrangement of other opportunities to become acquainted with
3 one's colleagues would be beneficial to an emergency unit – for example, workshops, where
4 different perceptions and values can be discussed openly.
5
6

7 More interprofessional collaboration would be required particularly in leadership and management,
8 to improve i) the coordination of work as a whole, and ii) the implementation of organisational
9 changes and new or modified professional roles. In addition, an interprofessional development plan
10 for workplaces – entailing commitment from all the professional groups – is necessary here
11 (Viinikainen et al. 2012). Taking our findings into account, we also agree with Kilminster and
12 Zukas (2007) in arguing that interprofessional collaboration needs to be included in curricula for
13 medical education. Current obstacles to interprofessional collaboration appear in particular to be: i)
14 diverging professional values and core identities, and ii) power relations that create inequality.
15 Ultimately, the nature of collaborative situations varies depending on the individuals involved – our
16 research showed that interprofessionalism sometimes manifests itself surprisingly amid multi-
17 professional work when particular professionals are working together. In general, it seems
18 important to ask: what kinds of collaborative situations in medical emergency work must be
19 interprofessional and what kinds do not need to be? How can a model be built that promotes
20 efficient decision-making in situations where there is scarce time for thorough discussion (Rekola,
21 Isoherranen and Koponen 2005)?
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25 The INPROF researchers participated in the emergency unit's developmental actions, especially
26 with regard to the modified chief duty nurse system and leadership and management. The findings
27 of the project were brought to the unit as points to be considered, and they were taken into account
28 in the unit's developmental actions. Based on our findings and experiences, putting even moderate
29 developmental efforts into action requires major changes in attitudes in order to promote
30 collaboration, negotiation and the realisation of possibilities; in other words, a common will needs
31 to be fostered across all professional groups in circumstances strained by divergent administrations,
32 cultural traditions and the challenging nature of the work. Development can usually be executed in
33 small measures at most, and major changes often take years or even decades. However, the
34 complexity of a work context should not be seen as an insurmountable barrier; developmental
35 efforts should be pursued relentlessly when developmental needs are detected, as evidenced above.
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39 *Suggestions for further research*

40 In practice, the commitment of an individual professional to collaboration and development is
41 defined ultimately by what (s)he considers most important for his or her own work. At least in the
42 INPROF project, nurses were more committed to, and active in, developing collaboration than
43 doctors. This observation can be seen in many of the areas and perspectives examined in the project.
44 Our knowledge and understanding of the point of view of doctors is still too narrow here, and thus
45 warrants further investigation.
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48 Within the project, we noted that when the development of the emergency unit's action was
49 examined generally at the level of overall action, it often appeared unproblematic. When, instead,
50 developmental actions were scrutinised more closely – from the perspectives of the staff and
51 managers, for example – the situation was revealed to be more multifaceted (Valleala et al. in
52 press). Hence, we recommend a mixed-methods approach (e.g. quantitative surveys and qualitative
53 scrutiny of action) to attain a rich understanding of the context and build a solid, research-based
54 foundation for organisational development.
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57 As has been addressed in numerous studies of workplace learning (e.g. Collin et al. 2008;
58 Hodkinson, Biesta and James 2008; Paloniemi and Collin 2010b), in order to understand work
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1 processes, the conditions and constraints within collaboration, and/or the development of expertise,
2 processes at the individual and social levels must be seen as intertwined and, therefore, approached
3 simultaneously and equivalently. This is a challenging task, conceptually and methodologically. In
4 this research project, we have been able to show the importance of interweaving the individual and
5 the collective, especially in developmental efforts. In this way, an individual employee may increase
6 his/her understanding of authority in different decision-making situations, which will help the
7 person to position him/herself as a meaningful member of the work community. This approach can
8 aid different professional groups in understanding the roles, hopes and wishes of the other groups
9 better. Based on our findings, there is a space for distributed expertise to emerge and be promoted in
10 emergency work: every person has a defined role, but each knows and respects the roles of the other
11 staff members. As such, we suggest that work identities amid interprofessional collaboration and
12 learning need to be taken into the heart of professional development and education more
13 consistently and extensively. In addition, the findings of this research project have shown that the
14 focus here should be placed upon on various local and context-specific studies, in order, eventually,
15 for a comprehensive model of shared expertise to be generated.
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19 *Limitations of the study*

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21 This research project investigated the collaboration of professionals in one hospital emergency unit.
22 Qualitative research per se does not allow generalisations (Patton 2002), nor were such
23 generalisations pursued to begin with in this study. The findings of this project can be utilised,
24 however, in researching and developing action in similar work contexts. Further, different
25 methodological choices, such as quantitative surveys or extensive interviews with staff members,
26 would have yielded different types of data. Both researcher triangulation and methodological
27 triangulation, in addition to frequent discussions with the emergency unit staff, were utilised to
28 validate the data, but we acknowledge that a degree of subjectivity is always present in the
29 interpretations of qualitative research.
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36 (project number 109295).
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Figure 1. Themes of collaboration in emergency work.

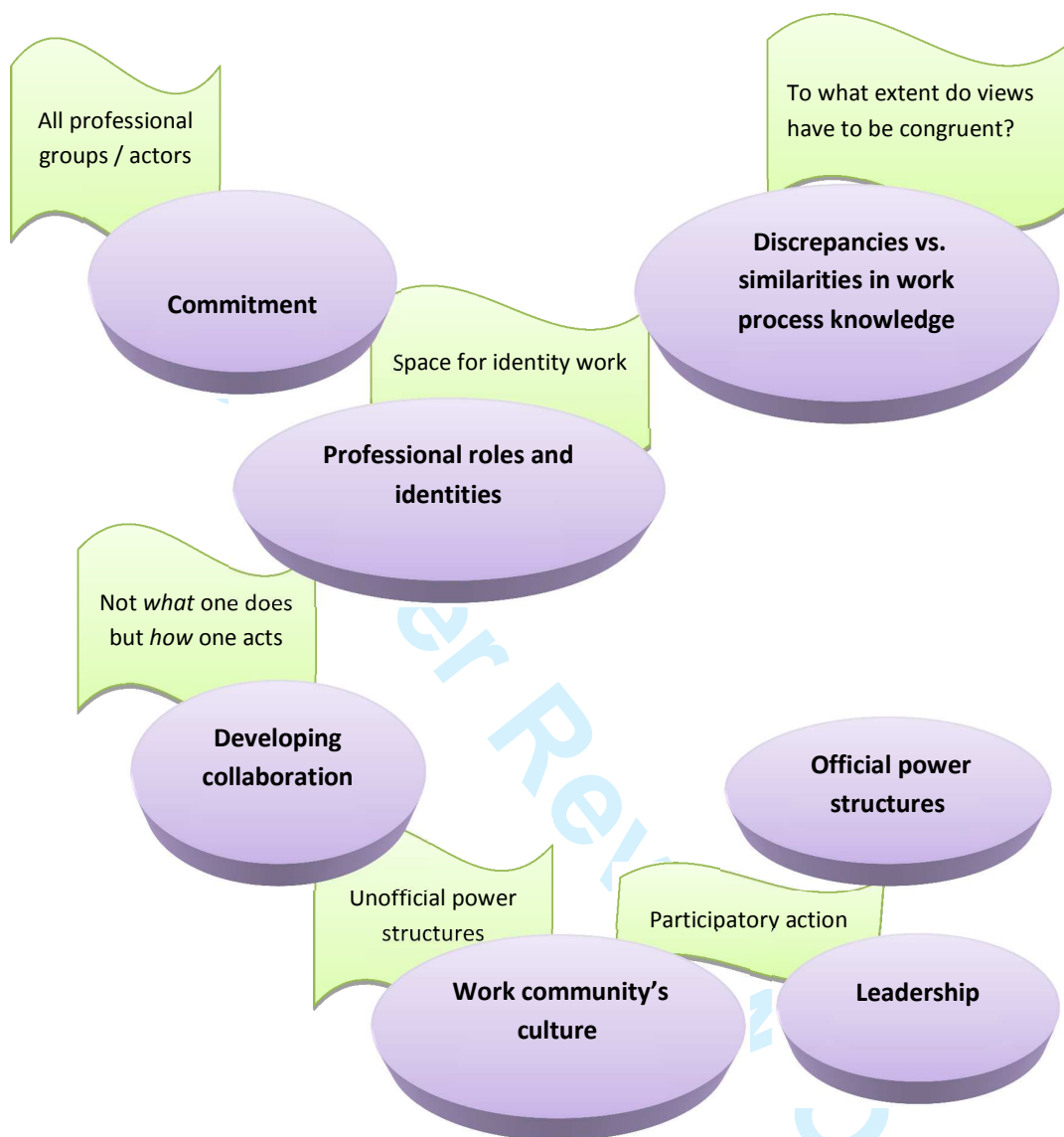


Table 1. Sub-studies in the INPROF project.

Phenomenon	Data	Why?
<p><i>Teamwork and interprofessional collaboration in emergency work</i></p> <p>Collin et al. 2012.</p>	<p>Observations (85 hours), interviews (n = 11)</p>	<p>To get acquainted with teamwork processes and interprofessional collaboration in the unit.</p>
<p><i>Ward rounds on the EIW</i></p>	<p>Observations (10 hours), interviews (n = 8)</p>	<p>Rounds are an essential means of collaboration, while also being a partially problematic area.</p>
<p><i>Participation opportunities amid organizational change</i></p> <p>Valleala et al. in press.</p>	<p>Audio-recordings and observations in meetings (20 hours), field interviews with 10 chief duty nurses and six care teams, interview with the head nurse, observations on the work of chief duty nurses (22 hours).</p>	<p>Due to rearrangements in regional emergency care, a substantial increase in the unit's patient volume was anticipated; the response was to change several action models, e.g., the chief duty nurse system.</p>
<p><i>The identity negotiations and professional agency of a changing professional role (chief duty nurse) in the work community</i></p> <p>Paloniemi et al. forthcoming.</p>	<p>A focus group interview with five chief duty nurses, interviews with two head nurses, field interviews with 10 chief duty nurses and six care teams, observations on the work of chief duty nurses (22 hours).</p>	<p>The role of chief duty nurse is rather unique, both nationally and internationally, an area upon which little previous research has been done.</p>