Emergency physicians in the Netherlands
Kathan, C.D.

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date: 2008

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Copyright
Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 03-11-2019
9 Conclusions and Discussion

The main questions in this study are (Q1) How can differences in the development and deployment of EPs be explained? and (Q2) Under which task environmental and organizational circumstances can EPs contribute to improve organizational performance?

9.1 How can differences in the emergence of EPs be explained?

With regard to the first question, we compared the development of EPs between two countries—the Netherlands and the UK—and between five Dutch hospitals.

The Netherlands and the UK. Despite some analogies with regard to the starting point and the introduction of EPs, the basic concept of developing EPs is quite different in the UK and the Netherlands. The UK turned trained specialists into EPs. Emergency medicine was designed as a recognized specialty from the very beginning, and its first doctors were specialists from various specialties, hence on a par with long-established specialists. The cultural mandate, which requires self-confident practitioners to establish a new profession, was hence very distinct. In the Netherlands, by contrast, EPs are not designated as specialists and it is not clear whether emergency medicine will become a recognized specialty. EPs are not on a par with long-established specialists. They very much rely on other specialists’ courtesy when it comes to negotiating EPs’ assignments, responsibilities, and further development. The power distribution is therefore different from the UK; in the Netherlands, EPs are comparatively weak. Their future career perspectives are quite uncertain, which could prevent the most ambitious doctors from choosing emergency medicine. This development could, in the long term, result in a downwards spiral and endanger the sustainable development of EPs in the Netherlands. Figure 9.1 illustrates the different developments graphically. It shows that EPs in the UK were recruited from a pool of established specialists and subsequently had the power to decide, mainly by themselves, on the further development of their own occupation. In the Netherlands, EPs develop next to the pool of established medical specialists. It is the specialists who have the power to decide on the EPs’ future.
9. Conclusions and Discussion

With regard to creating an institutional license, EPs take similar professionalization steps in both countries. However, the sequence of these steps differs as well as other specialists’ involvement. Compared to British EPs, Dutch EPs again rely more heavily on their specialist colleagues and existing specialties largely influence the EP development. Given the specific circumstances of the EP introduction approach this is a necessity to enable the EPs’ development towards a recognized profession. Still, it distinguishes them from their British colleagues who have been able to develop a solid professional position by themselves.

In addition to applying existing professionalization approaches, this study attempted to enlarge the scope and to take simultaneous occupational developments and the organizational mandate into account. While EPs in the UK emerged in a stand-alone fashion, in Dutch ECUs, the competition for emergency patients is between EPs and other currently developing occupations. The most important among them are emergency nurse practitioners and physician assistants who are also currently increasingly developed in British ECUs. In the UK, however, EPs have acquired a solid medical ECU dominance during recent decades; they act as
9. Conclusions and Discussion

supervisors for the new occupations rather than being competitors. In the Netherlands, by contrast, EPs enter into professional competition from a much weaker starting point. They neither have the time nor the status-related advantages of their British colleagues. They need to compete with the simultaneously emerging occupations and their development is, unlike in the UK, more endangered by emergency nurse practitioners and physician assistants.

The organizational mandate is the decision of a majority of organizations to employ EPs or other professionals – nurse practitioners, physician assistants, or acute medicine doctors – for certain patient groups. In the UK, it was mainly the specialists’ lobby that drove organizations’ decisions to hire EPs. Today, EPs themselves have a say in the hospitals’ decision about whether or not to introduce other professions at ECUs. In the Netherlands, it is still unclear whether the organizations’ decisions will be driven by financial arguments, imitation of other organizations’ approaches, quality evaluations, or patient centeredness. By executing their organizational mandate, it will certainly be the hospitals’ role to determine the new professions’ future prominence.

Five hospitals in the Netherlands. The comparison of driving and restraining forces in five Dutch hospitals revealed distinct differences and similarities.

Nearly all hospitals experience forces that favor the implementation of EPs; most of these forces are cognitive-technical in nature and originate from external pressure. The logical answer to these forces, the implementation of EPs can face restraining forces that are mostly socio-political in nature, based on resistance from other professions. These socio-political restraining forces are comparatively strong in hospitals in an early EP stage; they are weakening and increasingly replaced by socio-political driving forces in more EP-advanced hospitals. One of the key elements of EP implementation is thus turning socio-political restraining forces into driving forces. Achieving this goal is easier in small non-teaching than in large teaching hospitals because specialists in small hospitals can experience changes brought about by EPs more directly than their colleagues in teaching hospitals; EPs need less supervision which entails fewer disturbances for specialists. During day shifts, this enables specialists to focus on their own tasks. During night and weekend on-call duties, it results in a direct benefit for specialists’ spare time. This benefit is less clear in teaching hospitals where residents are available to intercept queries from the ECU.
In order to weaken restraining socio-political forces and strengthen driving ones, hospitals should try to implement the EP-based care system as comprehensively as possible, avoiding reversible steps. This advice, however, demands a possibly paradoxical procedure: to irreversibly implement an innovation of unproven benefit (EPs) against possible restraining forces from old-established specialists. We found that most hospitals do not take such steps. Therefore, despite being the preferable implementation strategy for sustainable EP development, a completely irreversible EP implementation it is not likely. Strengthening the driving forces and furthering the advancement of the EP-system, in practice, rely on the EPs’ ability to counteract existing restraining forces. EPs themselves have to push advancement, prove their benefit as fast as possible and act as motivated pioneering doctors. Given their uncertain professional future, this can be quite a challenge for the mainly inexperienced doctors.

EPs can only prove their benefit when specialists transfer certain tasks and allow EPs to work on their behalf. If, however, specialists cling to full control over ECU patients, they won’t experience much benefit from EPs. If specialists don’t experience any benefit, they have no incentive to delegate patient responsibility to EPs. The fewer patients EPs get to see, the less their benefit for the ECU. This, in turn, could entail even stronger restraining forces. A vicious circle can develop where the likely ending is the abolishment of EPs. In order to avoid such a development, an implementation approach has to be found which, from the very beginning, provides clear cut fields of responsibility and which clearly defines the boundaries of different medical occupations.

The different driving and restraining forces among the investigated hospitals constitute an observable distinction between two broad types of EPs in the Netherlands: quasi intrahospital GPs on the one hand and quasi emergency specialists on the other hand. These role models broadly coincide with the strength of socio-political forces. With strong socio-political restraining forces, the former professional role is predominant; with strong socio-political driving forces the latter. This dichotomy hinders the definition of a consistent occupational and professional identity. Moreover, it shows again the uncertainty about the EPs future role in Dutch hospitals. The threat to their profession by other currently emerging professions is probably more imminent to the intrahospital GP role since nurse practitioners or physician assistants could step in to fill it to a certain extent. If the role of quasi
emergency specialist becomes prevalent, EPs are likely to face less threat from the other described professions. However, this role only seems achievable when socio-political restraining forces are dispelled.
9. Conclusions and Discussion

9.2 Under which task environmental and organizational circumstances can EPs contribute to improve organizational performance?

9.2.1 EPs’ positive impact and limitations

EPs’ influence on organizational performance varies between large teaching and small non-teaching hospitals. It also differs with regard to the four variables of organizational performance.

Since this study was conducted at an early stage of EP implementation. Most data was collected only shortly after the first EPs had started working. On the one hand, this implied the disadvantage that not all effects were strong enough to be measurable and significant. On the other hand, it provided us with an insight into the bottlenecks of the organizational change and issues surrounding the EPs’ implementation.

Organizational quality of care

We found that EPs can contribute to fewer faces-per-patient and to fewer unscheduled returns if they are properly integrated into the organization. This finding shows that EPs can contribute to more task integration which enables a higher continuity of care for the patients.

However, if EPs are inappropriately integrated, organizational quality of care can become worse. Up to now, EPs do not contribute to shorter waiting times and treatment times. They rather seem to extend them. This can be caused by the lack of delegated authority, which still makes supervision necessary. EPs then become an additional layer in the medical hierarchy, thereby increasing rather than reducing task differentiation and consequently not cutting down on waiting, treatment and throughput times. In addition, this add-on approach does not result in fewer contact persons for the patient but rather more, especially if supervision does not take place by phone but in person. The organizational quality of care can then be even lower with EPs than without them. To prevent this from happening, EPs should be implemented with the original reasons of their development in mind: EPs should be seen to partly substitute residents and specialists, thereby permitting them to concentrate on core tasks within their own departments. Put graphically, with arrows
indicating the patient care transfer between doctors, EPs should enable the following patient-oriented care process:

\[ \text{EP/specialist resident} \rightarrow \text{specialist,} \]

instead of the commonly observed process:

\[ \text{EP} \rightarrow \text{specialist resident} \rightarrow \text{specialist.} \]

Once EPs are stably established as permanent parts of ECUs – which is a legitimate as the medical quality assessment has shown - it may even be possible to allocate some supervisory tasks to them and to develop the following work flow especially in large teaching hospitals:

\[ \text{Specialist resident/EP-resident} \rightarrow \text{EP} \rightarrow \text{specialist.} \]

In order to achieve this outcome, specialists from all specialties need to facilitate EPs. This requires clear communication and planning, and clear agreements on financial as well as on aspects of responsibility over patient domains.

Another limitation on the possible positive impact of EPs on the organizational quality of care is their relative number within hospitals. Compared to the number of other kinds of doctors working at the ECU, some hospitals hire fewer EPs. In those settings, specialists and nurses are likely to regard interns or residents as the standard doctors while EPs form an exception. As long as EPs are an occupational exception, other professionals’ work routines and attitudes towards doctors at the ECU are unlikely to change; specialists and nurses will treat EPs like residents or interns rather than bearing their individual qualification in mind. The danger then exists that the work systems do not accommodate the EPs as an innovation, but that the innovation - the EP- is assimilated into the old structure.
9. Conclusions and Discussion

Costs
A clearly positive impact on indicators representing costs was only found for small non-teaching hospitals, where EPs contribute to reducing the number of consultations. Not only does this help hospitals to contain costs, it can also play a role in limiting patients’ throughput time, thus enhancing the experienced organizational quality of care. We did not however, find evidence for a shorter throughput time – neither for small non-teaching nor for large teaching hospitals. The combination of certain indicators of the two variables organizational quality of care and costs did not show, however, that more diagnostic tests go along with extended throughput times. Although the experienced EPs in case +EP_S_ADV conduct a comparatively high number of diagnostic tests, throughput times are rather short. The tests seem to be well-organized and thus do not lead to extensive patient throughput times. This shows the merits of good work organization: although many diagnostic tests cause high costs, the patients’ experienced organizational quality of care is not necessarily negatively affected by it.

With regard to limitations of EPs’ positive impact, we found that EPs work more often according to protocols than residents. To the extent that these protocols are developed to cover all kinds of eventualities and when specialists insist on strictly following them, even more diagnostic tests might be conducted, leading to even increased costs. Again, the future development of EPs could break this vicious circle: i.e. if EPs became recognized medical specialists, they would no longer need to gain “trust” from the other specialists by covering all eventualities. EPs would then have the final patient responsibility and could decide which protocol to follow to what extent and when to deviate from it by themselves. If EPs become medical specialists, protocols would not have to be followed blindly. This would contribute to containing costs on the micro-level by reducing unnecessary diagnostic tests.

Working climate
A positive impact of EPs was found with regard to a number of -but not all- experienced working climate dimensions, based upon qualitative and some quantitative evidence. EPs contribute to higher overall and intra-occupational commitment; moreover, they experience work as more positively challenging than residents.
Still, EPs’ positive impact on working climate is limited. It is even smaller for small non-teaching hospitals than for large teaching hospitals as we found that employees of smaller ECUs experience a better working climate regardless whether or not EPs are used.

Another limitation of EPs’ positive impact shows for the social interaction dimensions team learning, interpersonal atmosphere and interpersonal support: cases in an early EP-implementation stage do not show a distinct interdisciplinary team spirit. Especially if specialists are critical about EPs, the latter will even refrain from teaming up with the ECU nurses. This implies poor preconditions for the social interaction dimensions and entails a worse working climate.

Some of the working climate results indicate major career uncertainties for EPs. EPs do not perceive better opportunities for personal development at the ECU than other doctors. They are still uncertain about their career perspectives. Will they become specialists, will they be able to act as ECU managers, or did they invest in training which will render them a lifelong “quasi-resident” status? As long as this question is not answered by the responsible bodies, this uncertainty is not likely to dwindle. The precariousness of this position also shows in the comparatively high uncertainty about work rules and professional roles in the cases with EPs. ECUs that adopt EPs therefore need to put emphasis on developing clear rules about competencies, patient allocation, task division, professional hierarchies, responsibilities, authorities, and cooperation.

Medical quality
A major factor for good medical quality is the doctors’ length of work experience. Trained EPs tend to have more experience than most other doctors who work at ECUs. According to our measurement, they also deliver a high quality of care. In other words, EPs are able to provide a higher medical quality than interns, GP-residents and early years’ specialist residents. The results show that a high quality can also be attained with inexperienced doctors, but only at the expense of a higher investment of senior staff like nurses and medical specialists. EPs can combine both benefits; high medical quality at reduced input from senior staff members.
9. Conclusions and Discussion

For all four performance dimensions, the evidence from quantitative data for the EPs’ positive impact is limited. Still, data on most indicators suggest a positive trend, which is often supported by the rich qualitative data. Qualitative and quantitative evidence together thus form a stable basis for the conclusions presented here. Given this study’s rather early moment in EP implementation, future investigations may render even clearer proof and potentially corroborate our findings.

9.2.2 Critical aspects of EP implementation

Two key findings of this study are that if EPs are not properly implemented, certain indicators of organizational performance can decrease even compared to not having EPs. If the work flow at the ECU is suitably organized and staffed with sufficient numbers of experienced doctors, organizational performance, as measured in this study, can be as good or even better without EPs. As a result of the preceding discussion, we can deduce some of the main problems in the implementation of EPs:

1) The integration of EPs in the traditional medical hierarchy causes problems for both EPs and other doctors. EPs are a new medical profession in the Dutch medical system. Specialists are uncertain to what extent they should grant autonomy and delegate patient responsibility; EPs are therefore easily treated as residents. Specialists do not delegate sufficient responsibility to EPs to result in a measurable improvement of organizational performance. Instead, an additional layer in patient care can be created. This hinders not only a better organizational performance; it also keeps EPs from developing their own professional role.

2) The limited number of EPs both on the labor market and in hospitals does not contribute to the change of existing work structures. As long as there are not enough trained EPs available to staff ECUs around-the-clock, existing EPs are likely to adapt to the traditional structure instead of bringing about an innovative structure.

3) Closely related to the previous two points is a third problem, which is that ECUs often work according to old, traditional work routines. With EPs being a new “ECU technology”, existing routines should be changed to utilize the opportunities brought by the new technology.
4) EPs are still uncertain about their future career prospects. As long as it is unclear how emergency medicine will develop further, specialists will not know how to handle EPs.

5) Up to now, different professional EP positions and work roles exist both between hospitals and within hospitals. While some EPs feel and behave and are regarded as intramural GPs, others are regarded as and feel like new specialists-to-be. While in some hospitals EPs function as the surgeons’ “bulk workers”, they are affiliated with internal medicine in others. These inconsistencies counteract the development of a distinct professional role and identity. The responsible bodies play an important role in formulating standardized EP skills and knowledge and in standardizing ways to achieve and maintain them. The latest advancements by the SOSG (Stichting Opleiding Spoedeisende Geneeskunde) and the NVSHA (Nederlandse Vereniging Spoedeisende Hulp Arsten) – i.e. the formulation of an EP position paper and advancing a national training program - are promising steps into this direction.

Current debates extensively discuss whether EPs should become recognized specialists or whether their status and training duration should be retained as initially scheduled. From a professionalization viewpoint, the first part of this study showed that EPs would face fewer threats from other professions if they became medical specialists; moreover, forces restraining the EP development would be likely to be weaker. Recognizing emergency medicine as a medical specialty could therefore make the EPs’ profession more sustainable. From an organizational viewpoint, as investigated in the second part, our findings advocate a different message. At present, the EPs in the investigated cases are able to deliver adequate medical care. Their intended position in the medical hierarchy, as well as their training, is suitable and sufficient to meet patient demands. If EPs did not encounter the aforementioned professionalization issues, their initial occupational concept would not need to be adapted. It would be inefficient to recognize EPs as medical specialists.
9. Conclusions and Discussion

9.3 Conclusions for theory
This study highlighted a number of shortcomings in the existing professionalization and organization literature. In chapter 2, we suggested expanding prevalent professionalization approaches by including the analysis of parallel emerging professions and the creation of an organizational mandate. In chapter 5 ff. we incorporated variables into our contingency framework which have often been neglected in other studies, i.e. the managerial and political setting as well as the level of personal coordination by dint of social network analysis. The following three conclusions therefore have three different foci: the first conclusion relates to the societal level, the second to the organizational level, and the third to the actor level.

Parallel streams of emerging occupations and organizational mandate
Most professionalization literature focuses on either the creation of cultural mandates or institutional licenses. We found these approaches insufficient for explaining the ongoing professionalization of, and threats to, EPs in the Netherlands. For the creation of a sustainable occupation with organizational employment status, it is also important to investigate the competition of and adjustment with other, parallel developing occupations. This is especially important when the other occupations are targeted at similar tasks (e.g. emergency care) or resources (e.g. emergency patients). If several new occupations emerge at the same time and if their domains are not clearly demarcated, competition can occur. This competition demands mediation by means of a third license, the ‘organizational license’. It is the organizations’ role to intervene in the competition between new professions by “granting” this license to either one of them. If managers in multiple organizations take the same decision and make their resources available to the same occupation, this occupation is likely to achieve sustainability. By taking collective decisions about parallel emerging occupations, it is thus work organizations that are finally responsible for sustainable professionalization.

Including the managerial and political setting
Knowledge about the managerial and political setting, including details about the introduction of EPs in the +EP-cases, enabled us to conduct force field analyses of EP implementation. We could thereby reveal the sources of different EP roles and applications.
Task environment in healthcare contingency theory studies is often limited to extra-organizational indicators, e.g. task uncertainty or input predictability, or classic contingency variables, e.g. size, age, technology. Actor approaches suggest that important contextual characteristics of organizational units can result from intra-organizational linkages or dependencies with other units or individuals. We accommodated both approaches to the organizational level by combining the task environment with the contextual intra-organizational aspect of the managerial and political setting, since we expected it to play an important role in the ‘fitting’ with the organizational structure. It indeed proved to be essential for the analysis and interpretation of the performance data. Detailed knowledge about the managerial and political setting, including details about the EP implementation, enabled us to incorporate the following aspects to the analyses:

1. ECUs vary with regard to their managerial medical setting and other professions’ involvement in its doctors’ lobbying. Either, specialized medical managers are available who represent the new occupation’s interests and communicate on a par with the other specialists. Or, the new professionals represent their interests themselves while being subordinate to medical specialists. This difference influences the relationship between the new and existing professions.

2. ECUs vary with regard to their autonomy in taking decisions and to the degree of financial involvement and dependence on specialist units. These determine the power relation between ECUs and other specialists, which can, positively as well as negatively, influence the pace and the process of the new occupations’ development.

3. Characteristics of the EP implementation are important for the proper analysis of quantitative data. For example, the kind of patients that EPs are allowed to see with regard to specialty and source of referral. This contextual knowledge contributes to the more accurate analysis of EPs’ performance as compared to other doctors. Moreover, it also acts as an indicator of EPs’ acceptance by medical specialties.

4. Certain contextual characteristics of the EP implementation are important for the proper interpretation of results. For example, the participation of specialists in the decision to implement EPs, which explains possible
tensions between occupational groups that, may affect certain measured variables.

Combining structural contingency theory and the social network approach

We included actor relations in our study by linking structural contingency theory with the social network approach. In order to achieve a lower level of aggregation than most other studies in the field, social network analysis was used to reveal important actors in intra- and inter-occupational personal coordination. It was particularly valuable to investigate coordination patterns of the different medical groups in the actual patient involvement which otherwise would have remained unclear. It proved especially useful for interpreting the results on throughput time and medical quality. The following conclusions are based on combining the contingency framework with social network analyses:

1. In small hospitals, the parallel use of different doctors limits EPs’ benefits as specialists’ involvement remains high.
2. Small hospitals without EPs are able to organize patient care at the ECU better than small ECUs with only a few EPs.
3. In large hospitals, specialists’ activities at the ECU decrease with more advanced EPs; still, they keep control over patient domains through their residents.
4. Compared to other professional groups, EPs require less involvement of other professionals to deliver adequate medical care.
5. Trained EPs can successfully act as supervisors for EP residents.
6. Despite points 4. and 5., specialists do not empower EPs to the degree that EPs’ competence allows them to.
7. To the extent that the situation described in point 6. prevails, the network data also explains long waiting times in terms of the limited autonomy transfer from specialists to EPs.

Furthering the application of structural contingency theory by including these aspects in the theoretical framework added to the complexity of the study. Yet, it opened up the possibility of new analyses and interpretations. If these had been ignored, imprecise conclusions could have been drawn. Solely focusing on the external task environment when applying structural contingency theory is therefore
9. Conclusions and Discussion

not always sufficient. Intra-organizational contextual aspects need to be added, in order to fully determine important contingencies. Moreover, restricting the personal mode of coordination to descriptive coordination modes can be too superficial as they ignore actors’ relations. Our study therefore applies a fusion of contingency theory and actor approach and shows how closely intertwined they are. From a **contingency perspective**, the context is partly designed and largely affected by actors. Even if an organization’s objective contingencies seem to be clear, the specific man-made contextual framing can draw a different picture that needs to be taken into account.

From an **actor approach** we can state, that actors are not solely engaged in demarcating their domain of responsibility and in forming part of conscious (micro)-political decision processes. They are also – consciously or unconsciously - involved in context building. This argument also affects existing professionalization approaches: the **institutional license** (Hughes 1958) or, as Abbott (1988) refers to it, **jurisdiction**, are not only achieved by taking conscious steps; they are also affected by unconscious context building of the actors involved.

This reasoning has implications for classic structural contingency theory. It implies a differentiation of contingency factors, based on the level of detail involved: First, **classic contingencies** - like size, age or technology - refer to broad objective characteristics. Second, at a more detailed level, **contingencies as understood by people** are based on peoples’ perceptions. Third, **political realities** are based on the interplay of task environmental characteristics with the context built by the actors involved. The level of detail is the highest. The dynamic of the organizational setting investigated in this study called for a high level of analytical detail, hence urging us to reveal the political reality of ECUs by combining theoretical approaches.

In summary, we can state that the fusion of contingency theory and actor approach proved very valuable, in that it enabled us to reveal important findings about the deployment of emergency physicians and the organizational performance of ECUs. With regard to theory development, it showed that if one is to consequently apply one of the approaches, from a certain threshold of precision, one is forced to also use the other.
9. Conclusions and Discussion

9.4 Limitations of the study and areas for future research

This study contributes to a better understanding of the use of emergency physicians in Dutch hospitals. Still, it has some important limitations which might inspire future research and these have to be noted and discussed.

This study would ideally have lent itself for longitudinal research. Before and after EP implementation measurements could have been conducted in a number of hospitals, possibly yielding clear-cut information on changes given a quite stable context and task environment. Such a design, however, was not feasible. As with most studies, time restrictions applied. Finding a number of suitable, cooperative cases and arranging and conducting a first measurement just before the implementation of EPs would have been difficult enough. Giving enough time to let the organizational change gain momentum would have been beyond the scope of this project. Hospitals themselves or future researchers could initiate longitudinal studies to monitor the effectiveness of organizational change.

Unlike many studies that investigate health care performance, we did not collect data from direct patient involvement; in order to take patients’ interests into account we restricted ourselves to using general figures of organizational quality of care. We based our indicators on existing studies that suggest for example, that patients prefer shorter waiting times. We did not however, ask patients whether or not they perceived waiting times to be long or short. This approach was deliberately chosen to avoid respondent biases; patients might have different perceptions in large cities compared to rural areas, or in Northern and Southern parts of the country. However, we think that surveying patient opinions through interviews or questionnaires could make a valuable contribution to the investigated topic. Therefore, future studies might want to take up on this challenge.

Although collecting an overwhelming total amount of data, some measurements achieved a rather low response rate. In particular, data on medical quality was difficult to collect, resulting in an n too small to compare case by case analyses.

Another limitation with regard to the data selection manifested itself in the weak statistical power of some analyses. Statistical insignificance indicates missing variation in the data. Measurement tools that are not detailed enough will only reveal significant major differences, while minor differences remain undiscovered. Despite
testing the tools beforehand, different scaling options in the applied questionnaire might have detected more significant variation in this study. This shortcoming is generally difficult to balance: on the one hand, keeping questionnaires simpler can yield a higher return rate. On the other hand, simplicity can reduce the significance of the results. In this study, we opted the former; future researchers might choose the latter.

An argument that is often put forward against case studies is their possibly limited external validity, i.e. the generalizability of the results and the extent to which findings apply to other than the investigated cases. As described in chapter 2, we employed several tactics to enhance generalizability. Due to the diversity of the investigated cases with regard to certain characteristics, we assume that most ECU executives will discover analogies between their own hospital and one or several of the described cases. We therefore think that the provided recommendations apply to a much broader Dutch hospital community than just the seven explicitly involved cases.

An approach for future research could be the repetition of this study. As stated earlier, we do not assume that EPs are sufficiently developed to tap their full potential. Even hospitals working with EPs have only recently started to do so and as multiple studies have shown, organizational change needs time to come into effect. We could thus assume that our results in +EP cases will show more clearly in a few years time. But will they indeed?

Another future research approach could consist of conducting follow-up measurements in cases presently without EPs in the event that they are implemented. Some of the investigated –EP cases are currently considering employing EPs. Corresponding to the research limitations described above, this study could serve as the first time point (t0) of a longitudinal study. Subsequent measurements after the EP implementation could serve as comparison time points (t1, … tn), yielding longitudinal evidence on the selected cases.

Moreover, future research could advance the topic of EP implementation and professionalization in an internationally comparative way. Bottlenecks in emergency care can be observed in many countries; ECU managers worldwide have to find solutions to deal with these problems. The introduction of EPs and other new professionals is increasingly gaining ground. This offers vast possibilities for conducting comparative international research on the organization of emergency care. Our study could serve as a starting point for it.