

Accreditation of general practices in Denmark: findings from surveys and outcomes after the opportunity to improve

Introduction

As part of the collective agreement for general practice in Denmark, general practitioners (GPs) have, since January 2016, been accredited according to the Danish Healthcare Quality Programme. Between 1 January 2016 and 30 April 2017, a total of 541 practices have been accredited. At the end of 2018, about 1699 general practices will have been surveyed.

Accreditation is a procedure where a recognised body (IKAS) assesses whether general practice meets a set of common standards which describes what good quality within general practice is. Assessment is a half-day survey, conducted by a team consisting of one GP and one surveyor from a similar profession (e.g. a nurse or GP receptionist). The standards for GPs consist of mostly legal requirements.

There are 16 overall standards, which are further broken down into 64 indicators.

Standard title
1. The professional quality
2. Use of good clinical practice
3. Adverse events
4. Patient evaluations
5. Prevention of confusion of patient's identity
6. Prescription of medicine and renewal of prescriptions
7. Paraclinical tests
8. Emergency response and cardiac arrest
9. The patient health record, data safety and confidentiality
10. Availability
11. Referral
12. Coordination of patient care
13. Acquisition, storage and disposal of clinical utensils and medicine/vaccines
14. Hygiene

15. Management and operational activities
16. Hiring, introduction and competency development

The 64 indicators¹ are assessed according to a four-point scale (Met (1)/Largely Met (2)/Partially Met (3)/Not Met (4). If all indicators are rated at one of the two upper levels, accreditation is awarded immediately. If not, the practice has the opportunity within 3-6 months to demonstrate improved compliance before a final decision on accreditation is made. If there are still low-rated indicators, an independent committee will decide, based on a risk assessment, whether or not accreditation can be awarded.

In Denmark, we generally distinguish between three different types of general practices; single-handed practice (Danish term: *solo praksis*), partnership practice (Danish term: *kompagniskabspraksis*) and cooperation practice (Danish term: *samarbejdspraksis*).

The objectives of the study

1. To assess and analyse the extent to which standards are not sufficiently met, and to assess the improvements achieved at follow-up.
2. To examine which indicators have the most ratings on the two lower levels.
3. To examine the influence of variations across gender and age of the GPs, practice types (single, partnership, cooperation), geographical location of the general practices (five regions) and time of the survey. The variations age and gender are only examined in relation to single-handed practices.

Objective one

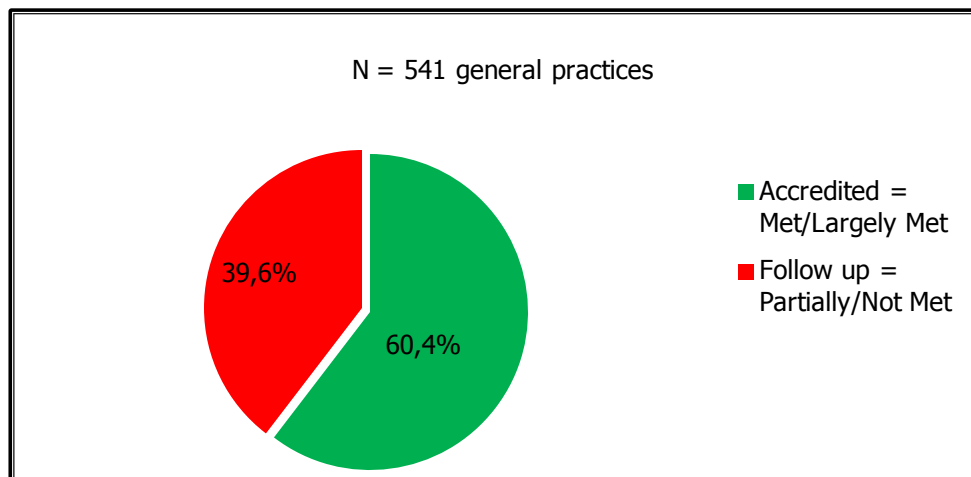
By 30 April 2017, 541 general practices have been surveyed and this is what we can conclude:

In almost 40 percent of the 541 general practices, the surveyor team found one or more conditions that did not meet the minimal requirements in the indicator (including legal requirements). These practices had the opportunity to improve the fulfilment of the indicators within 3-6 months. At the time of the study, 50 of the practices that didn't meet the minimal requirements still await completion of follow-up. After the opportunity to improve, 97.6 percent of the general practices (equivalent to 491 general practices) were accredited without comments. Of the remaining 2.4 percent, 1 percent were accredited with remarks and 1.4 percent were not accredited. The responsibility for handling practices that are not accredited is located with the five regional cooperation committees concerning general practice.

¹ An indicator is a measurable element.

Diagram 1

Accreditation status after external survey



Result

This high percentage of practices that meet the minimal requirements after the external survey and not least after the follow-up period suggest that working with the standards does indeed improve the quality in the practices included in this study. The fact that almost all the general practices that didn't meet the requirements after the external survey have corrected this in connection with the completion of the follow-up survey suggest that a continued focus, also after the external survey, has a positive effect on the improvement of quality.

Objective two

We investigated which areas had the most negative findings i.e. the most findings on the two lower levels (Partially Met and Not Met). The findings suggest that the areas concerning prevention of confusion of patient's identity, handling paraclinical tests and hygiene are the most difficult areas to fulfil for the practices².

The specific indicators that lead to comments in each specific standard are listed below:

- Prevention of confusion of patient's identity
Correct procedure for identification of patients prior to paraclinical tests not followed

² Accreditation of medical specialist practices in Denmark shows a different picture. The three most challenging areas are: 1) hygiene (the practice cannot account for the handling of particularly infectious patients and cannot refer to documents describing this, 2) adverse events (patients and relatives are not informed of their possibility to report adverse events) and 3) the patient health record (annual audit of 20 current patient health records to check whether the patient health records include the data required in pursuance of current statutory provisions have not been conducted). The fact that these are the three most challenging areas can be explained by the different task composition within medical specialist practices.

- Paraclinical tests
Systems to ensure follow-up on paraclinical tests were not evident
- Hygiene
Correct procedure for sterilisation of medical equipment for re-use not followed

Objective three

We looked at the following intermediate variables and examined how the variables influenced the assessment outcome of the three indicators above (Met/Largely or Partially/Not Met):

- Gender (single-handed practices)
- Age (single-handed practices)
- Type of practice (single-handed practice, partnership practice, cooperation practice)
- Regions (geographical location of the general practices)
- Time of completion of the survey

In order to examine the context further, we have the following hypotheses that we will test in the study. The hypotheses are based on the data we had available by 30 April 2017.

Hypotheses

- Gender
We expected, among other things, referring to the AKIAP research project and the article '*Almost half of Danish GPs have negative a priori attitudes towards a mandatory accreditation programme*³', that there would be a difference in compliance of the three indicators based on gender.
- Age
Correspondingly, on the basis of the knowledge already provided in AKIAP research project, we expected that there would be a difference in the compliance of the indicators based on age.
- Type of practice
We also hypothesised that the compliance of the three indicators in partnership practices and cooperation practices would be higher than single-handed practices
- Regions
We expected that there would be a difference in compliance of the three indicators across the five regions. This hypothesis is based on the expectation that the five regional quality consultants, who are

³ Waldorff FB, Nicolaisdóttir DS, Kousgaard MB et. AL Dan Med J 2016;63(9):A5266

employed in the five regions to facilitate the implementation of the Danish Healthcare Quality Programme in general practice locally, work differently, due to their different organisational structures.

- Time of completion of the survey
We also assumed that practices would learn over time and the regional quality consultants would be able to teach them how to fulfil the requirements in the three indicators and that would increase compliance over time.

Method

The study included 541 general practices located in one of the five regions (Capital Region of Denmark, Central Denmark Region, North Denmark Region, Region Zealand, Region of Southern Denmark) and distributed among one of the following three practice types (single-handed, partnership, cooperation).

See the distribution in table 2 below.

Table 2

Region	Type of practice		
	N = 541		
	Single-handed practice	Partnership practice	Cooperation practice
Capital Region of Denmark	70	81	34
Central Denmark Region	29	79	15
North Denmark Region	16	26	6
Region Zealand	25	38	9
Region of Southern Denmark	22	74	17
Total	162	298	81

On the basis of the data from 541 general practices concerning the variables above, we conducted a multivariate analysis to examine whether these specific intermediate variables influenced the fulfilment of the three selected indicators.

Out of the 541 practices, 491 practices had achieved final accreditation status at the time of the study and 50 practices still await completion of their follow-up.

In the following analysis we have excluded 10 cases due to missing values.

Results

The analysis shows that the age of the GP's in single-handed practices does not have any significant influence on the fulfilment of the three selected indicators. Neither does the time of the survey.

On the other hand, the analysis shows that the variable, gender plays a significant role in relation to the fulfilment of the minimal requirements in two of the indicators. A female doctor in a single-handed practice performs significantly better in compliance of the indicators concerning systems to ensure follow-up of paraclinical tests and correct procedure for sterilisation of medical equipment for re-use than a male doctor in a single-handed practice. The type of practice also plays a significant role as partnership practices have a significantly higher fulfilment of the indicators concerning correct procedure for identification of patients and systems to ensure follow-up of paraclinical tests than single-handed practices and the cooperation practices.

Regarding the region (the geographical location of the practices), it appears that this variable influences the fulfilment of the requirements in the indicator regarding correct procedure for sterilisation of medical equipment for re-use. The Central Denmark Region performs significantly better than the other four regions in meeting the requirements of this indicator.

For more detail see appendix 1 and 2 (appendix 2 is currently only available in Danish)

Conclusions

Accreditation works! This can be deduced by the results of the first objective of the study. We can conclude that when defining requirements in the form of a standard and surveying the practices based on this standard, it seems that their compliance increases. If the general practices do not fulfil the requirements when we start, they do when we are finished with the accreditation process. Therefore it can be deduced that if requirements are to be met, regarding for example quality or legal requirements, accreditation is a sure way to implement them.

Gender and type of practice have significant influence on the compliance of the requirements described in the Danish Healthcare Quality Programme.

The geographical location apparently has some form of influence. We will investigate this further as we get more data.

Neither the time of the survey nor age have any influence, so these two hypotheses have been invalidated.

Appendix 1

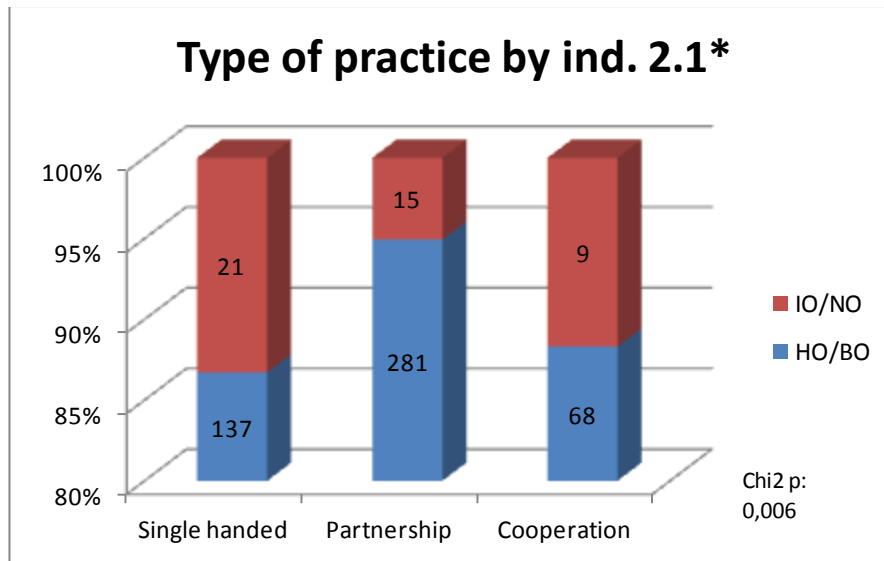


Fig. 1 *Prevention of confusion of patient's identity
Correct procedure for identification of patients prior to paraclinical tests not followed

IO/NO: Not Met/Partly Met

HO/BO: Met/Largely Met

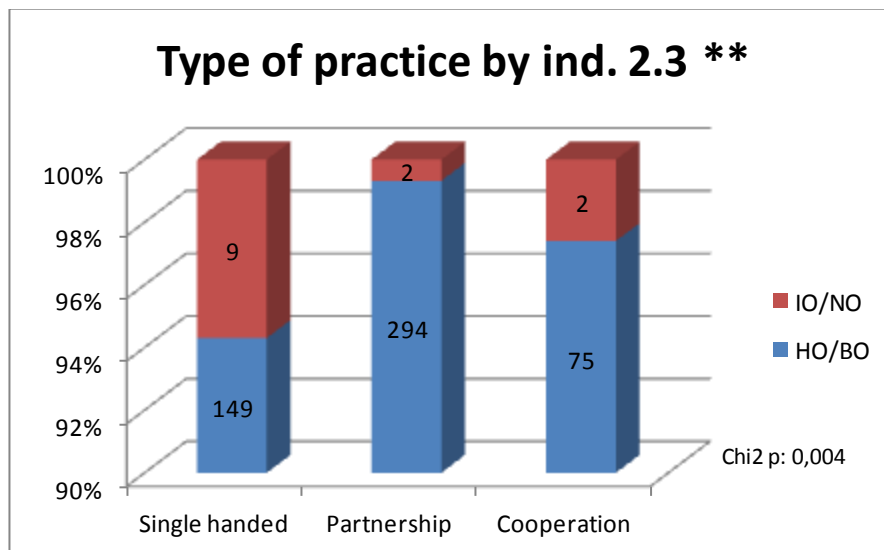


Fig. 2 ** Paraclinical tests
Systems to ensure follow-up on paraclinical tests were not evident

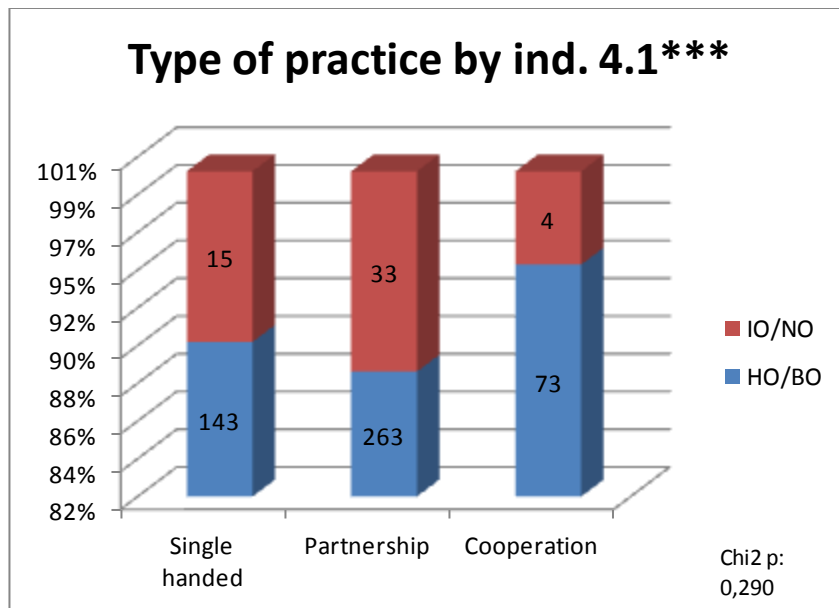


Fig. 3 *** Hygiene
Correct procedure for sterilisation of medical equipment for re-use not followed

In order to establish the direction of the coherence found in fig 1 and 2, we have used a PROBIT model (see appendix 2). This verifies that Partnership practices perform better here than single-handed and Cooperation-practices.

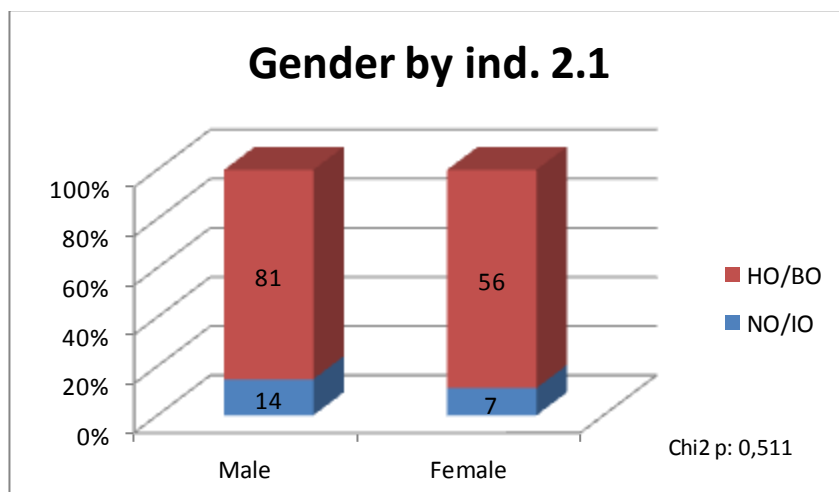


Fig. 4 Prevention of confusion of patient's identity
Correct procedure for identification of patients prior to paraclinical tests not followed

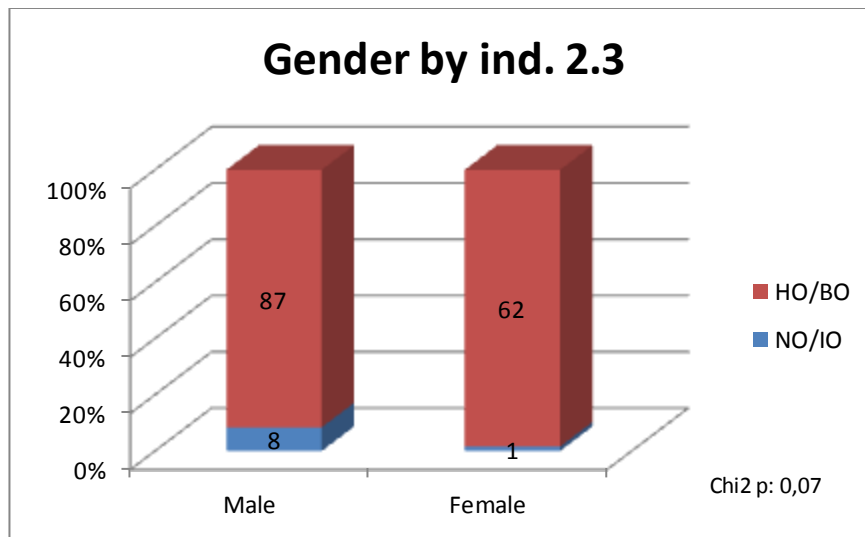


Fig. 5 Paraclinical tests
Systems to ensure follow-up on paraclinical tests were not evident

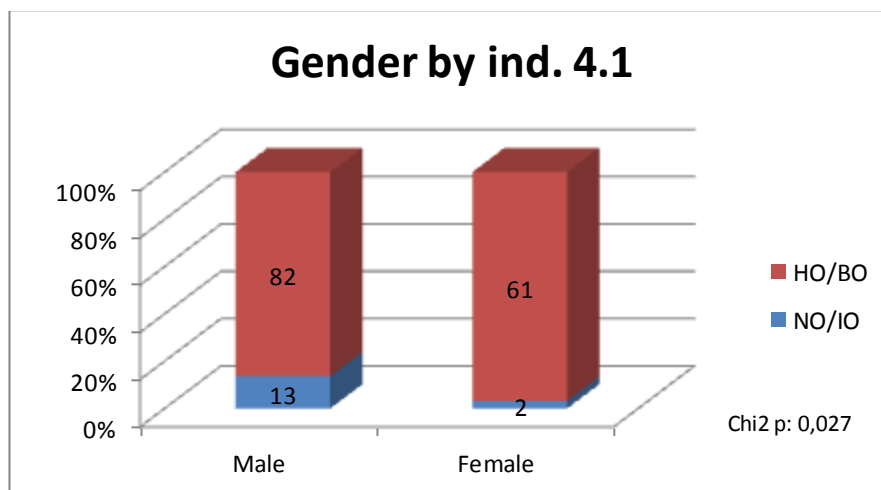


Fig. 6 Hygiene
Correct procedure for sterilisation of medical equipment for re-use not followed

In order to verify whether gender can explain the tendencies seen in practice types, we have excluded male doctors in single handed practices from the data set, see below. These results do not change our original findings significantly.

Ind. 2.1	Single-handed	Partnership	Cooperation
NO/IO	7	15	9
HO/BO	56	281	68
			p. 0,054

Ind. 2.3	Single-handed	Partnership	Cooperation
NO/IO	1	2	2
HO/BO	62	294	75
			p: 0,347

Ind. 4.1	Single-handed	Partnership	Cooperation
NO/IO	2	33	4
HO/BO	61	263	73
			p: 0,059

Appendix 2

Probit-modellen er en simpel regression, hvor den afhængige variabel antager to forskellige værdier. I dette tilfælde *NO/IO* eller *HO/BO*.

Den følgende model estimeres

$$ind_1 = \beta_0 + \beta_1 \text{samarbejdspraksis} + \beta_2 \text{kompagniskabspraksis} + \sum_{i=1}^4 \beta_i \text{region}_i + \varepsilon$$

$$\text{Hvor } ind_1 = \begin{cases} 1 & \text{HO/BO} \\ 0 & \text{NO/IO} \end{cases}, \text{ kompagniskabspraksis} = \begin{cases} 1 & \text{hvis kompagniskabspraksis} \\ 0 & \text{ellers} \end{cases}$$

Basisgruppen 'solopraksis' udelades og dermed måler koefficienten nedenfor indikatorvurderingen for kompagniskabspraksis relativt til solopraksis. Koefficienten er signifikant positiv og det tyder dermed på, at kompagniskabspraksis scorer højere end solopraksis.

Indikator 1.1.2	Koefficient	$P > z $
Kompagniskabspraksis (relativt til solopraksis)	0.5529	0.003

På samme vis estimeres regressionen med samarbejdspraksis som basisgruppe.

$$ind_1 = \beta_0 + \beta_1 \text{solopraksis} + \beta_2 \text{kompagniskabspraksis} + \sum_{i=1}^4 \beta_i \text{region}_i + \varepsilon$$

Indikator 1.1.2	Koefficient	$P > z $
Kompagniskabspraksis (relativt til samarbejdspraksis)	0.4108	0.059

Koefficienten er signifikant positiv, hvorfor kompagniskabspraksis scorer højere end samarbejdspraksis.

For indikatoreren 2.2.3 fås, at kompagniskabspraksis scorer højere end solopraksis, jævnfør nedenstående tabel.

Indikator 2.2.3	Koefficient	$P > z $
Kompagniskabspraksis (relativt til solopraksis)	0.9194	0.002