Translation of original article published in The Journal of the Norwegian Medical Association:
Sandvik H, Hunskår S. Working style among regular general practitioners and other doctors in out-of-hours emergency services in Norway. Tidsskr Nor Legeforen 2010; 130: 135–8

Working style among regular general practitioners and other doctors in out-of-hours emergency services in Norway

Abstract

Background. RGPs (regular general practitioners) are obliged to take on duties in the out-of-hours services in Norway, but they perform less than half of the work done by doctors in these services. We wished to compare compensation claims for out-of-hours work from rGPs with those from other doctors.

Material and methods. NAV (the Norwegian Labour and Welfare administration) provided information about all doctors working in the out-of-hours services in Norway in 2006 (4 729, of whom 2 220 were rGPs) and coupled this with compensation claims from them in the same year.

Results. RGPs had 46.6 % of all patient contacts in the out-of-hours services, but more telephone contacts (57.4 %) and simple/short contacts (50.7 %) than other doctors. Other doctors had most contacts in the largest (59.8 %) and most central (56.7 %) municipalities, and used general and unspecific diagnoses (12.6 % of consultations) more often than rGPs (11.0 %). Older doctors used fewer fees than younger doctors, but otherwise the total number of fees only differed slightly between groups of doctors. Newly qualified doctors serving their compulsory practice period, claimed extra compensation for long consultations in 41.2 % of cases, rGPs who were also general practice specialists claimed this particular fee in 20.2 % of cases, and other doctors claimed it in 35.7 % of consultations. RGPs wrote sick notes more often (7.1 % of consultations) than newly qualified doctors (5.7 %) and other doctors (6.6 %), but general practice specialists wrote sick notes most often (7.4 %).

Interpretation. Experienced rGPs and general practice specialists spend less time per patient than other doctors in the out-of-hours services.

Hogne Sandvik
hogne.sandvik@isf.uib.no
Nasjonalt kompetansesenter for legevaktmedisin
Kalfarveien 31
5018 Bergen

Steinar Hunskår
Nasjonalt kompetansesenter for legevaktmedisin
og
Seksjon for allmennmedisin
Institutt for samfunnsmedisinske fag
Universitetet i Bergen

Duty-work in OOH (out-of-hours) medical emergency services is compulsory for rGPs (regular general practitioners) in Norway. Exemption from this obligation is granted in certain circumstances, but investigations show that many more than those who are formally exempt do not participate in the OOH services (2, 3). At least half of duties in the OOH services are taken on by other doctors than rGPs; i.e. doctors who work full time in the services, locums, doctors in training, hospital doctors, PhD students and other university-employed doctors.

Work in OOH services is demanding, circumstances are often difficult and there is an increased risk of making mistakes (4). On rare occasions one gets involved in dramatic emergency situations which one is not prepared to handle (5). However, the reasons for contacting a GP are usually the same outside and within normal working hours (6, 7). It has therefore been argued that rGPs are best qualified to take on work in the OOH services (8, 9).

Whether work done by rGPs differs from that done by other doctors in OOH services has not been studied systematically. We aimed at undertaking such a study, based on compensation claims from NAV (Norwegian Labour and Welfare Administration).

Material and methods

The material comprises all electronic compensation claims from identified doctors working in the OOH services in Norway in 2006. The variables are patients' sex and age, time of contact with a doctor, diagnoses and compensation fees. These data are coupled with the following information about the doctors: age, sex, municipality where they practice and whether they are rGPs or not. NAV provided us with an anonymized datafile.

At some OOH services the doctors have a fixed salary, and the compensation claims are registered by organization No. (for the OOH service or the municipality). These claims, which comprise 7.3 % of all rGP contacts in the study, are not included in this material. The same applies to paper-based claims and compensation paid directly to the patient when the doctor does not have an agreement about direct compensation. It is estimated that this accounts for 4.9 % of all contacts with the OOH services (7).

General practice specialists were identified through them claiming the fee that all specialists use for consultations and sick calls. It was not possible to identify doctors in training directly. We therefore chose to identify them indirectly and approximately by using the following criteria: age < 33 years, not rGP, claimed compensation in either April/May or October/November (but not for both periods). This resulted in identification of 767 doctors, a somewhat higher number (3 %) than the number of doctors in training in hospitals in 2005 (745), and who therefore worked in the municipal health services the year after (10).

The municipality where the doctors worked were grouped according to number of inhabitants and centrality. Centrality is defined as a municipality's geographical location in relation to a centre where there are certain central functions. Centrality is graded according to a scale from 0 to 3, where 0 signifies the least central municipalities and 3 the most central (11).

NAV and the Privacy Ombudsman for Research in NSD (Norwegian social scientific data service) assessed the project. As it is not possible to identify individuals in this material, directly or indirectly, the project was not subject to obligatory notification.

As the material comprises all claims for remuneration and does not represent a sample, all data are presented without confi-

Main message

- Regular GPs perform less than half of the work done by doctors in the out-of-hours services
- Total use of fees differs only slightly between groups of doctors
- Regular GPs use time fees less often than other doctors on duty in the out-of-hours services

dence intervals and no statistical tests have been performed.

Results

Claims were identified from 4 729 doctors; 2 220 rGPs and 2 509 other doctors. 1 566 rGPs were men (mean age 45.5 years) and 654 were women (mean age 41.2 years); among other doctors there was an equal number of men (1 566, mean age 36.7 years) and 943 were women (32.9 years). The sex distribution among those assumed to be doctors in training was 382 men (mean age 29.0 years) and 385 women (mean age 28.9 years).

The doctors had 1 520 474 patient contacts in the study period – 77.2 % consultations, 5.8 % sick calls, 16.0 % telephone contacts and 1.0 simple contacts. RGPs had 46.6 % of the contacts and other doctors 53.4 %. Figure 1 and Figure 2 show the distribution of contacts at different times of day and through the year for rGPs and other doctors. There were most contacts in the afternoon (64.0 %) and evening (4–12 pm), while 8.7 % of contacts were during the night (00–8 am). There was no difference in time of day for contacts between rGPs and other doctors, but in the summer vacation (July) rGPs only had 37.5 % of contacts. RGPs had relatively few simple contacts and telephone contacts; the other doctors relatively more consultations and sick calls (tab 1). Other doctors had relatively more contacts in the large and central municipalities (tab 2).

Patients of rGPs had a mean age of 35.5 years, while those of other doctors were 35.8 years. The proportion of female patients was 53.3 % for rGPs and 53.2 % for other doctors. There were also small differences in use of diagnoses, although other doctors had a tendency to use somewhat more general and unspecific diagnoses.

RGPs claimed fewer fees per consultation and there was a tendency towards older doctors claiming fewer fees. The same tendency appeared for use of the time fee, but the difference was larger between rGPs and other doctors for this variable (tab 5). Table 6 shows how frequent some fees were used by six different groups of doctors on call. Doctors in training used the time fee in 41.2 % of consultations, rGPs that were also specialists in general medicine in 20.2 % of consultations and doctors who were neither rGPs nor specialists in general medicine used it in 35.7 % of consultations. Corresponding numbers for laboratory investigations (fee 701a) were 33.8 %, 27.8 % and 31.4 % respectively. Doctors in training gave patients sick leaves least often (5.7 %) and specialists in general medicine most often (7.4 %).

Table 1 Various patient contacts by type of doctors

Fees (fee number[1])	Number	RGP (%)	Other doctor (%)
Simple contacts (1ad, 1ak, 1h)	14 528	57.4	42.6
Telephone contacts (1bd, 1bk, 1g)	243 026	50.7	49.3
Consultations (2ad, 2ak, 2fk)	1 174 195	45.7	54.3
Sick calls (11ad, 11ak)	88 725	45.6	54.4
All	1 520 474	46.6	53.4

[1] According to the normal collective agreement

Table 2 Patient contacts by type of doctor and municipality where they practice

No. of inhabitants	Number of contacts	RGPs (%)	Other doctors (%)
< 2 001	57 291	46.3	53.7
2 001–5 000	181 409	48.7	51.3
5 001–10 000	193 598	48.6	51.4
10 001–50 000	644 596	49.8	50.2
> 50 000	432 593	40.2	59.8
Municipal centrality			
Least central	285 299	45.9	54.1
Less central	126 039	50.6	49.4
Quite central	366 548	52.5	47.5
Central	740 388	43.3	56.7

Table 3 Diagnosis codes and main groups that varied most between rGPs and other doctors (ICPC-system)

	RGPs (%) (n = 708 452 contacts)	Other doctors (%) (n = 812 022 contacts)
A03: Fever	2.4	2.1
A29: General symptoms/complaints	0.3	0.6
A58: Therapeutic advice/conversation	0.1	0.7
R74: Acute upper respiratory infection	4.9	5.3
R83: Respiratory infection	1.3	0.8
A: General and unspecified	11.0	12.6
L: Muscle- and skeletal system	15.5	14.9
R: Respiratory	22.0	21.5

Table 4 Total number of fees (including consultation fee) per consultation. Fees related to other contact types and specialist fees are excluded

	RGP		Other doctor	
Age group (years)	Woman	Man	Woman	Man
< 30	2.60	2.44	2.49	2.46
30–34	2.47	2.47	2.62	2.45
35–39	2.35	2.43	2.43	2.37
40–44	2.26	2.34	2.41	2.50
45–49	2.26	2.26	2.13	2.35
50–54	2.21	2.12	2.30	2.18
> 54	2.33	2.15	2.40	2.27
All	2.33	2.30	2.49	2.40

Discussion

The data on which this study is based are comprehensive, almost complete and reliable. The differences shown are therefore real. However, it is not certain that use of fees always reflects practice. Misuse may occur; e.g. inappropriate time fees may be claimed, but doctors may also forget to claim fees that they are entitled to. The latter probably occurs among the least experienced – i.e. doctors in training – and most often with fees that are used relatively seldom.

Motivation to take on OOH duties will vary from doctor to doctor. Even if many rGPs find OOH work interesting and financially rewarding, there are many who see this as a heavy duty that comes in addition to a long working day. Other doctors will more often have economic motives for taking on OOH duties. This may be an explanation for the difference found between rGPs and other doctors for type of contacts.

RGPs solve problems over telephone and through simple contacts more often than other doctors, whereas other doctors make sick calls or see patients in the office more often than rGPs.

This study confirms that rGPs participate least in OOH services in large and central municipalities (2, 3). This is probably because doctors in larger municipalities have more opportunities to pass on their duty work to someone else. There is also a relatively large proportion of other doctors who take on duties in OOH services in the smallest and least central municipalities. This is probably because doctors in training take on more duties in OOH services in these municipalities (12). The time curves also show that other doctors have more patient contacts than rGPs at all times of the day and almost all year. The difference is largest in the summer vacation when rGPs were responsible for only 37.5 % of contacts.

Patients are the ones to choose if they wish to contact OOH services or not, doctors on duty therefore have little or no influence over which patients they treat. This is illustrated by the lack of difference in sex and age between patients treated by rGPs and other doctors. The distribution of diagnoses was also close to identical, even though other doctors had a tendency to use more general and unspecific diagnoses. This may be because they feel somewhat more uncertain about making diagnoses.

Claiming of fees varies only slightly between rGPs and other doctors and there is no difference between the sexes. Older doctors claim slightly less compensation through fees than younger doctors. This can probably be explained by experience and that older doctors trust their clinical judgement more than the younger ones.

However, there is a large variation in use of time fees. This is a fee that doctors can claim if a consultation lasts for more than 20 min (30 min for sick calls). Doctors in training use this fee twice as often as rGPs who are also general practice specialists; other doctors use the fee 75 % more often than rGPs. Taking the similarity of patients into account, this is a large difference. Many problems at OOH services can be handled simply and quickly and it seems like rGPs manage these tasks better than other doctors.

RGPs also have more frequent contact with home nurses and other health professionals. They know the community and local organization of health services and can

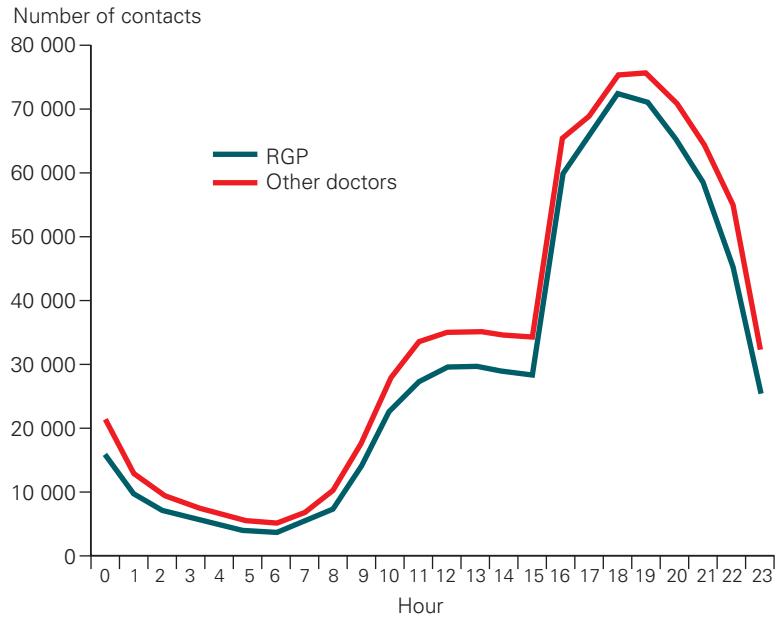

Figure 1 *Number of patient contacts per hour through the day for rGPs and other doctors*

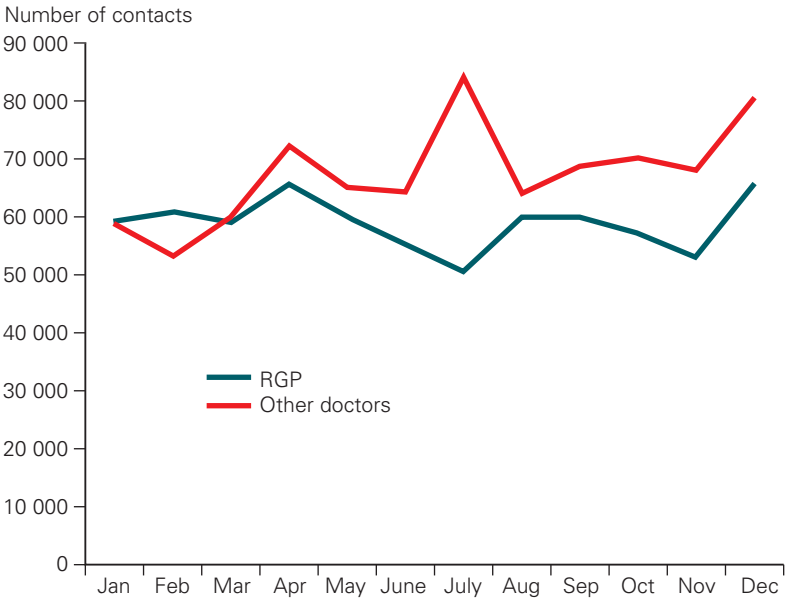

Figure 2 *Number of patient contacts per month through the year for rGPs and other doctors*

Table 5 Number of time fees (2cd, 2ck, 11cd, 11ck) per consultation and sick call

	RGP		Other doctor	
Age group (years)	Woman	Man	Woman	Man
< 30	0.39	0.36	0.38	0.40
30–34	0.35	0.33	0.41	0.37
35–39	0.30	0.31	0.36	0.36
40–44	0.26	0.31	0.42	0.37
45–49	0.30	0.24	0.28	0.31
50–54	0.21	0.19	0.34	0.31
> 54	0.28	0.23	0.35	0.32
All	0.30	0.27	0.38	0.36

Table 6 Fees as percentage of consultations where doctors have used different fees, by various doctor groups

Fees (fee number)[1]	RGP (%)	Specialist (%)	Both rGP and specialist (%)	Not rGP (%)	Neither rGP nor specialist (%)	Doctor in training[2] (%)
Contact with home nursing and otheres (1f)	4.1	3.8	4.0	2.6	2.6	2.9
Time fee (2cd, 2ck)	26.1	23.0	20.2	35.3	35.7	41.2
Surgical procedures (100, 103, 104, 105, 106a, 106b)	10.3	9.8	9.2	10.9	10.8	8.8
Conversation with next-of-kin (612a, 612b)	0.7	0.6	0.6	0.5	0.5	0.2
Conversation therapy psychiatry (615)	0.7	0.6	0.6	0.5	0.5	0.3
Admission psychiatry (616)	0.7	0.7	0.7	0.8	0.8	0.7
Laboratory investigation (701a)	29.6	27.6	27.8	30.8	31.4	33.8
Sick note (L1)	7.1	7.4	7.2	6.6	6.4	5.7
Number of consultations	536 459	376 465	291 566	637 736	552 837	138 517

[1] According to the normal collective agreement
[2] Approximate definition (see method section)

therefore make agreements about follow-up and in general cooperate with other parts of the services to a greater extent. RGPs also discuss more often with next-of-kin and offer conversational therapy to psychiatric patients more frequently. Other doctors on call admit more patients to psychiatric care and also use laboratory services somewhat more often than rGPs.

Doctors in training claim the laboratory and time fees most often, but claim some other fees to a notably low extent. One explanation may be that they forget to claim compensation because they have not become well enough acquainted with the fee system.

It may seem as if less experienced doctors are the most restrictive with respect to giving patients sick leave, while general practice specialists are the most liberal.

Forgetting to claim fees is not a likely explanation, as most medical record systems automatically generate fees for sick leave when a form for sick leave is generated.

One possible explanation is that experienced rGPs are used to handling sick leaves so that they to a larger extent complete the treatment, including the sick leave, and to a lesser degree leave this to rGPs (other colleagues) the next working day. We do not know if inexperienced doctors are more affected by a stronger emphasis on reducing sick leaves (from authorities and managers), while experienced doctors trust their own judgement to a larger extent.

Conclusion

This study shows that experienced rGPs and general practice specialists work quicker than other doctors in the OOH services. Otherwise there are small differences between the groups.

Declared conflicts of interest: None

Literature

1. Forskrift om fastlegeordning i kommunene. www.lovdata.no/cgi-wift/ldles?doc=/sf/sf/sf-20000414-0328.html (3.9.2009).
2. Sandvik H, Hunskår S. Hvilke leger mottar trygderefusjon for legevaktarbeid? Tidsskr Nor Lægeforen 2007; 127: 1347–50.
3. Sandvik H, Zakariassen E, Hunskår S. Fastlegenes deltakelse i legevakt. Tidsskr Nor Lægeforen 2007; 127: 2513–6.
4. Bratland SZ, Hunskår S. Medisinsk-faglige vurderinger i tilsynssaker mot allmennleger. Tidsskr Nor Lægeforen 2006; 126: 166–9.
5. Zakariassen E, Sandvik H, Hunskaar S. Norwegian regular general practitioners' experiences with out-of-hours emergency situations and procedures. Emerg Med J 2008; 25: 528–33.
6. Brügger EA, Jøsendal O. Registrering av aktivitet under legevakt. Tidsskr Nor Lægeforen 2001; 121: 2730–1.
7. Nossen JP. Hva foregår på legekontorene? Konsultasjonsstatistikk for 2006. NAV-rapport nr 4 2007. Oslo: Arbeids- og velferdsdirektoratet, oktober 2007.
8. Nasjonalt kompetansesenter for legevaktmedisin. ... er hjelpa nærmast! Forslag til Nasjonal handlingsplan for legevakt. Rapport nr. 1–2009. Bergen: Nasjonalt kompetansesenter for legevaktmedisin, Unifob helse, 2009. www.unifobhelse.no/upload/Handlingsplan.pdf (3.9.2009).
9. Arbeidsgruppe «Godt legevaktsarbeid». Faglige og organisatoriske krav til legevakt. Videreutvikling av legevaktsbaser og interkommunalt legevaktsamarbeid. Rapport. Oslo: Den norske legeforening, 2008. www.legeforeningen.no/asset/42183/1/Rapport_arbgr_legevakt_Dnlf.pdf (3.9.2009).
10. Statens autorisasjonskontor for helsepersonell. Årsrapport 2005. www.safh.no/publikasjoner/aarsrapport2005.pdf (3.9.2009).
11. Standard for kommuneklassifisering 1994. Oslo: Statistisk sentralbyrå, 1994. www.ssb.no/kommuner/komklasse94.html (3.9.2009).
12. Turnusrådet. Nasjonal evaluering av turnustjenesten for leger. Oslo: Den norske legeforening, 2006. www.legeforeningen.no/asset/33401/1/33401_1.pdf (3.9.2009).

The manuscript was received 4.4.2009 and accepted for publication 1.10.2009. The medical editor was Are Brean.