

Measuring workload of Swiss general practice: a five-yearly questionnaire-based survey on general practitioners' self-reported working activities (2005–2020)

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Summary

INTRODUCTION: General practitioners (GPs) play a key role in the delivery of health care in Switzerland. Assessing GPs' workload over time is essential to meet the population's health service demand and for future health care planning.

METHODS: The study involved four questionnaire-based cross-sectional studies among a representative sample of Swiss GPs on a five-yearly basis since 2005. Data on GPs' self-estimated workload and practice administration (face-to-face consultations, house calls, nursing home visits and clinical administrative work) were analysed in hours per week (h/week) or full-time equivalents (FTE; 100% = 55 h/week).

RESULTS: The mean age of GPs ($n = 2,037$) in 2020 was 54.9 years, significantly higher than in 2005 (51.4 years, $p < 0.001$, $n = 1,780$). The proportion of female GPs increased gradually from 16.5% in 2005 to 36.2% in 2020 ($p < 0.001$). The GPs' workload significantly decreased over the last 15 years from 50.2 h/week to 43.4 h/week or from 90.9% FTE in 2005 to 78.9% FTE in 2020 ($p < 0.001$). The decreased average workload across years was less pronounced in women (−4.4% FTE) than in men (−9.0% FTE, $p = 0.015$). Across all survey years, women worked on average 12.7 h/week or 23.2% FTE less than men ($p < 0.001$). The time spent with patients gradually decreased, whereas the amount of time spent on clinical administrative work remained stable since 2005 (9 h/week). In 2020, GPs were working more frequently in group practices compared to 2005 (45.0% vs. 12.4%, $p < 0.001$).

CONCLUSION: This study demonstrates a decrease in GPs' overall workload from 2005 to 2020, indicating that the “new” generation of GPs prefers to work part-time. This decrease is at the expense of direct face-to-face encounters with patients. Over the last 15 years, a clear trend exists towards more women in the Swiss general practice, persisting over-ageing of GPs, replacement of single-handed practices by group practices, and increasing burden of administrative tasks, a risk factor for burnout

and reduced job satisfaction. To maintain an efficient healthcare system in the future, substantial efforts are crucial to provide a positive and motivating insight into general practice to pre- and postgraduate students and improve the operational working conditions of GPs.

Introduction

General practitioners (GPs) play a key role in the delivery of health care and are usually the primary point of contact for patients' medical concerns [1, 2]. Approximately 70% of the Swiss population consult a GP every year, requiring two to three consultations on average [2]. The demand for GPs in Switzerland is rising as the population ages and becomes increasingly multimorbid [3]. Therefore, ensuring a sufficient supply of GPs is greatly important and a major challenge [4]. In 2011, the Organisation for Economic Co-operation and Development (OECD) defined one GP per 1,000 inhabitants as optimal primary healthcare [5]. However, for Switzerland, a survey of structural data from medical practices and outpatient centres in 2019 calculated a density of only 0.74 GPs per 1,000 inhabitants [6]. Below-average access for patients to GPs is observed particularly in rural regions of the Swiss midland [7]. A shortage of GPs must also be counteracted to save costs [8]. GPs and paediatricians manage 94.3% of all health problems in Switzerland and incur only 7.9% of health costs [9]. In addition, a shortage of GPs results in longer waiting times for patients and an increased workload for GPs [10]. In the UK, GPs are experiencing a huge demand for consultations, coupled with more complex patient care and increasing documentation requirements [11]. A trend towards increasing workload in primary care has also been observed in several other European countries [1, 12, 13]. A growing burden of work may cause burnout within the profession or lead to job abandonment, as well as affecting the overall quality of the healthcare system [12]. Assessing GPs' workload is therefore essential to reduce such negative outcomes and plan future health care.

Data on GPs' workload in Switzerland are limited. In 2010, the Swiss Primary Care Active Monitoring (SPAM)

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was launched, aiming at developing an instrument focusing on the quality of the Swiss primary care system [14]. The Federal Statistical Office regularly records structured information on GPs' practices and outpatient centres (MAS-survey) [6]. Further, the Swiss Medical Association (FMH) publishes yearly statistics on the demographic characteristics of Swiss physicians, but real-time data on GPs' daily workload are scarce [15]. The primary aim of this study was to analyse the workload of Swiss GPs at five-year intervals. GPs' self-estimated time spent on face-to-face consultations, house calls, nursing home visits and clinical administrative work was of particular interest. Secondly, the number of GPs working in single, double and group practices was analysed, along with the median number of patients seen by a GP per week and the mean consultation time.

Methods

Four questionnaire-based, cross-sectional surveys were conducted in 2005, 2010, 2015 and 2020 among a representative sample of Swiss GPs from the German-, French- and Italian-speaking parts of Switzerland.

Participant recruitment

The study population was a representative sample from the FMH database in 2005 and 2015. Physicians specialised as "General Medicine FMH", "Internal Medicine FMH", "General Internal Medicine FMH" and "Practical Doctor", and physicians without a specialist title ("Med. Pract.") who worked in a practice or ambulatory sector, were included. The samples in 2005 and 2015 were random, but the GPs evaluated in 2005 were contacted again in 2010. In 2020, the register of the online company Comparis.ch was the basis for the sample selection. Registered GPs specialised in "General Internal Medicine FMH" were identified. The sample selection was additionally adjusted with the Register of Medical Professions (MedReg). GPs with additional specialist titles (e.g., gastroenterology) and physicians working in hospitals were excluded (see table 1).

Table 1:
Participant recruitment.

Sample	2005	2010	2015	2020
Contacted physicians	2837*	1748*	3554*	5960**
– Non-eligible (retired, wrong address, dead etc.)	125	91	37	255
– Eligible	2712	1657	3517	5705
Completed responses	1780	1162	1299	2037
Response rate 1 (completed responses / eligible physicians according to AAPOR)	66%	70%	37%	36%
Sampling frame				
Total number of physicians in the ambulant sector with a FMH specialist title in "General Medicine FMH" or "Internal Medicine FMH" or "General Internal Medicine FMH" or "Practical Doctor"	7206	6187	6847	7227

* from randomised sample of FMH address data base

** from register of online company

Survey design

The questionnaires for 2010, 2015 and 2020 originated from the first survey in 2005. This was developed with guidance from the *British Medical Journal* [16] and included closed-ended questions regarding working hours, work habits, motivation and plans for future workload. In the course of the four surveys conducted, only a few adjustments were made to the questionnaire. The changes were mainly graphical-visual, to facilitate the completion by the GP. No changes were made in terms of the content and the questions had the same wording in all four surveys. For this study, data on GPs' workload (face-to-face consultations, house calls, nursing home visits and clinical administrative work) were analysed. Gathering these data was part of all questionnaires since 2005, using identical question phrasing.

Ethical considerations

The questionnaire was sent together with an invitation letter, informing the GPs that the data would be collected anonymously. The study team was unable to identify the person completing the questionnaire. Therefore, the study did not fall under the remit of the federal law Human Research Act, Art. 2.

Assessment of GPs' workload

The workload of physicians can be assessed in half-days. One half-day corresponds to a workload of 4 to 6 hours in Switzerland [17]. A full-time position is defined as an average weekly workload of 10 half-days [17]. Taking part-time into account, the workload can also be stated in full-time equivalents (FTE), with 55 hours per week corresponding to a workload of 100% [18]. In the surveys from 2005 to 2015, the workload was reported in weekly hours. The number of half-days was only recorded in 2020. Therefore, for the present study, workload is reported as hours per week and FTE. Additionally, for the year 2020, workload is presented as half-days. The selection of variables was made based on previous literature, indicating differences in workload across demographic variables such as gender, age, practice type, language and region [9, 19, 20].

Statistical analysis

Analysis was conducted in R (R Core Team 2020) [21], mainly with the R packages "dplyr" [22] and "ggplot2" [23]. Frequencies were shown for nominal and ordinal scaled variables. Mean and standard deviation (SD) were presented for normally distributed numeric variables, and median and interquartile range (IQR) were used otherwise. Group comparisons with nominal and ordinal scaled variables were calculated with the chi-squared test. The two-sample Student's t-Test (assuming variances not being equal using the Welch approximation to the degrees of freedom) was used for group comparisons with numeric variables. Multivariable linear and ordinal logistic regression analyses were performed to assess the relationship between dependent (FTE, total weekly workload and duration of consultation) and independent variables (year, age, sex, practice type, language, region and employment). Ordinal logistic regression (or simplified ordinal regression) is used to predict an ordinal dependent variable (categori-

cal variable for which the possible values are ordered) given one or more independent variables. We performed the ordinal regression using the “MASS” [24] package. All tests were two-sided, and a p-value of <0.05 was considered statistically significant.

Results

Overall, 1,780, 1,275, 1,299 and 2,037 GPs returned the questionnaire in 2005, 2010, 2015 and 2020, respectively. The demographic characteristics of the study participants in the four surveys are presented in table 2. The mean age of GPs in 2020 was significantly higher compared to 2005 (54.9 [SD = 7.94] vs. 51.4 [SD = 10.2] years, $p < 0.001$). In 2005, 16.5% of GPs were female. The proportion of women significantly increased to 36.2% in 2020 ($p < 0.001$). Language regions (German, French, Italian) were adequately represented in all surveys (table 2) [6].

In 2005, 12.4% of the GPs worked in group practices (>2 GPs). This proportion significantly increased over time: in

2020, almost every second GP (45.0%) was working in a group practice ($p < 0.001$). The number of single-handed practices substantially decreased from 2005 to 2020 (figure 1A).

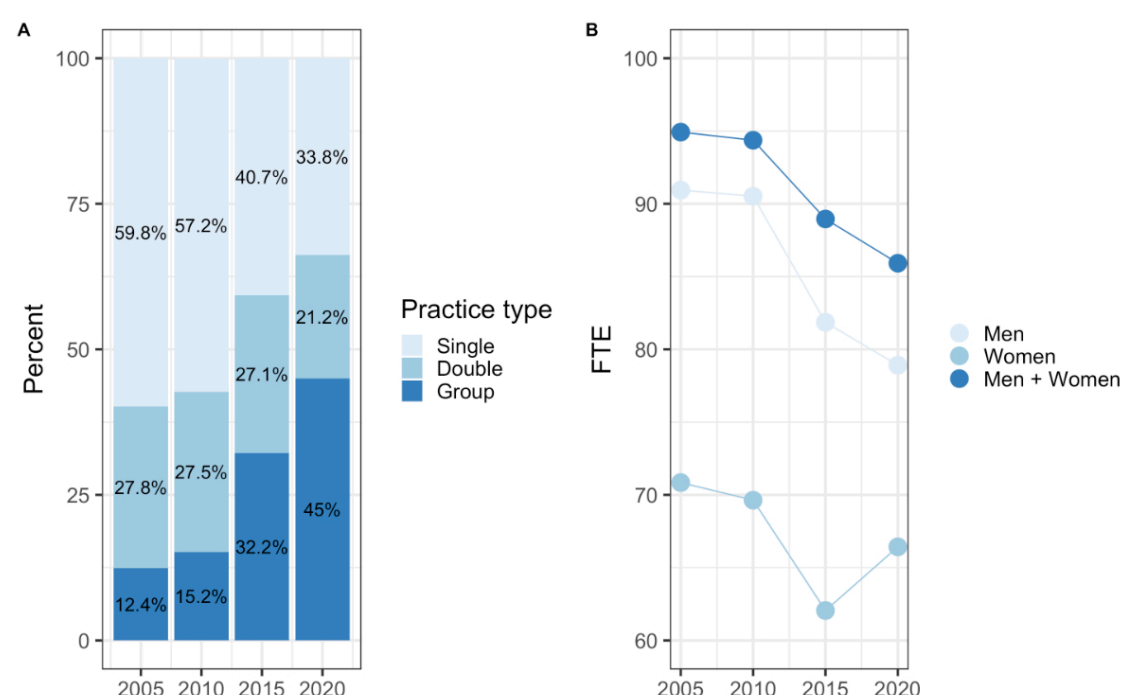
The median number of patients seen by a GP per week in 2020 was 80 (IQR = 50–105), although only data for 2020 were available here because the question was only asked in the last survey. In 2020, most GPs reported planned consultation time slots of 15 minutes (42.6%), followed by 20 minutes (32.1%) and 30 minutes (21.0%). The remaining percentages were consultation times of either <15 minutes (1.1%) or >30 minutes (3.1%). Multivariable ordered logistic regression showed that sex (female), language (French or Italian) and the location of the practice (city or agglomeration area) were independently associated with longer time slots for consultations in 2020 (table 3).

Table 2:
Demographic characteristics of participants of the surveys in 2005, 2010, 2015 and 2020.

Survey year		2005		2010		2015		2020		2005/2020
Questionnaires sent (n)		2837		1748		3554		5960		
Questionnaires analysed (total, n)		1780		1275		1299		2037		
		n	%	n	%	n	%	n	%	p-value*
Sex	Women	293	16.5	197	15.5	320	24.6	737	36.2	<0.001
	Men	1470	82.6	1064	83.5	928	71.4	1292	63.4	
	Missing values	17	1.0	14	1.1	51	3.9	8	0.4	
Age (mean/SD)		51.4	7.94	56.1	7.75	55.4	8.74	54.9	10.2	<0.001
Language regions	German	1241	69.7	965	75.7	879	67.7	1383	67.9	
	French	390	21.9	226	17.7	258	19.9	421	20.7	
	Italian	71	4.0	47	3.7	55	4.2	65	3.2	
	Missing values	78	4.4	37	2.9	107	8.2	168	8.2	

* p-values are <0.001 for the sex distribution and <0.001 for the mean age between 2005 and 2020.

Figure 1: A: Proportion of practice types 2005–2020. B: Mean full-time equivalents (FTE) in men, women and both since 2005.



Assessment of GPs' total weekly workload 2005 to 2020

The GPs' workload significantly decreased over the last 15 years from 50.2 hours per week to 43.4 hours per week or from 90.9% FTE in 2005 to 78.9% FTE in 2020 ($p < 0.001$). In 2020, GPs worked an average of 7.9 half-days/week. Across all survey years, women worked on average 12.7 hours or 23.2% FTE less per week than men ($p < 0.001$). In 2020, women worked on average 6.8 half-days per week and men 8.5 half-days per week ($p < 0.001$). In linear regression, the total weekly workload in the multivariable model decreased for women, over the last 15 years, with age, for employed GPs, and for GPs working in group and dual practices (table 4).

Further, a significant interaction existed between time and sex on workload ($p = 0.015$). The decreased average workload across years was significantly less pronounced in women (-4.4% FTE) than in men (-9.0% FTE; women: 70.8% FTE in 2005 to 66.4% FTE in 2020; men: 94.9% FTE in 2005 to 85.9% FTE in 2020; figure 1B).

Additionally, GPs with weekly working hours of 45 hours or more ($\geq 80\%$ FTE) were analysed. In 2005, 71.8% ($n = 1,278$) of GPs reported weekly working hours of 45 hours or more compared to only 49.8% ($n = 983$) in 2020 ($p < 0.001$). In the subgroup with long weekly working hours in 2020, the proportion of women was smaller (18.2% in ≥ 45 h/week workload vs. 53.8% in < 45 h/week workload, $p < 0.001$), GPs were working more frequently in single practices (44.0% in ≥ 45 h/week workload vs. 23.4% in < 45 h/week workload, $p < 0.001$), and the mean age was higher (55.9 [SD 9.2] in ≥ 45 h/week workload vs. 53.8 [SD 10.9] in < 45 h/week workload, $p < 0.001$).

GPs' weekly clinical and administrative workload

GPs' time spent on face-to-face consultations with patients gradually decreased from 37.2 hours per week in 2005 to 31.1 hours per week in 2020 ($p < 0.001$). The workload in terms of home visits also decreased over time (2.9 hours per week in 2005 vs. 1.7 in 2020, $p < 0.001$). GPs' clinical activities in nursing homes were stable from 2005 to 2015 and dropped to some extent in 2020 (2.3 hours per week in 2005 vs. 1.6 in 2020, $p < 0.001$). The workload for clinical administrative tasks nearly remained stable over the years (9 hours per week). Details are shown in figure 2. In 2020, GPs spent 79.0% of their working time in direct patient contact (consultations, house calls or nursing home visits) and 21.0% on clinical administrative work on average.

Discussion

Assessing the workload of Swiss GPs at five-year intervals since 2005, a decrease in GPs' overall workload was observed. In 2020, Swiss GPs averagely worked around 7 hours less per week compared to 2005. This decrease was mainly at the expense of direct face-to-face encounters with patients, whereas clinical administrative work relatively increased. A likely explanation for the overall decrease in workload is the steadily increasing number of GPs working part-time. With 37%, Switzerland has the second most part-time workers in Europe, after the Netherlands [25]. A study published by the association of the Young Swiss Family Doctors (JHaS) showed that 76% of young GPs are currently working four days or less per week [26]. This trend towards part-time work can also be observed in other countries [27,28,29]. For example, GPs from Australia reported that part-time work enables coping with the increasing pressure of more complex and multiple health needs and more administrative requirements [28].

Table 3:

Multivariable ordinal logistic regression analysis to test the association of age, sex, practice type, employment, language and region with the categorised variable consultation duration in 2020 (< 15 min, 15 min, 20 min, 30 min, > 30 min).

Predictor	Consultation duration (minutes)		
	Odds ratio	95% CI	p
Age/15 years	1.02	0.92–1.12	0.724
Sex [female vs. male]	2.03	1.67–2.48	< 0.001
Practice type [double vs. single]	0.96	0.74–1.24	0.738
Practice type [group vs. single]	1.01	0.81–1.27	0.922
Self-employed [no vs. yes]	1.09	0.86–1.37	0.488
Language [French vs. German]	8.36	6.64–10.57	< 0.001
Language [Italian vs. German]	2.50	1.57–3.99	< 0.001
Region [agglom. vs. rural]	1.61	1.26–2.07	< 0.001
Region [city vs. rural]	2.45	1.96–3.08	< 0.001

Observations: 1,838; R^2 Nagelkerke: 0.440. CI: confidence interval.

Table 4:

Multivariable linear regression analysis to test the association of sex, year, age, employment and practice type with total weekly workload (outcome).

Predictors		ci. 2.5%	ci. 97.5%	p	Estimates	95% CI	p
(Intercept)					56.62	54.30 – 58.94	< 0.001
Sex [female vs. male]	–12.76	–13.55	–11.97	< 0.001	–11.02	–11.86 – –10.17	< 0.001
Year/15 years	–6.78	–7.67	–5.89	< 0.001	–1.96	–2.89 – –1.03	< 0.001
Age/10 years	1.23	0.82	1.64	< 0.001	–0.57	–0.98 – –0.16	0.006
Self-employed [no vs. yes]	9.64	8.46	10.82	< 0.001	–4.06	–5.31 – –2.82	< 0.001
Practice type [double vs. single]	–4.69	–5.56	–3.82	< 0.001	–3.25	–4.10 – –2.41	< 0.001
Practice type [group vs. single]	–8.84	–9.69	–7.98	< 0.001	–4.82	–5.75 – –3.89	< 0.001

Observations: 5,919; $R^2 = 0.181$, R^2 adjusted = 0.180. CI: confidence interval.

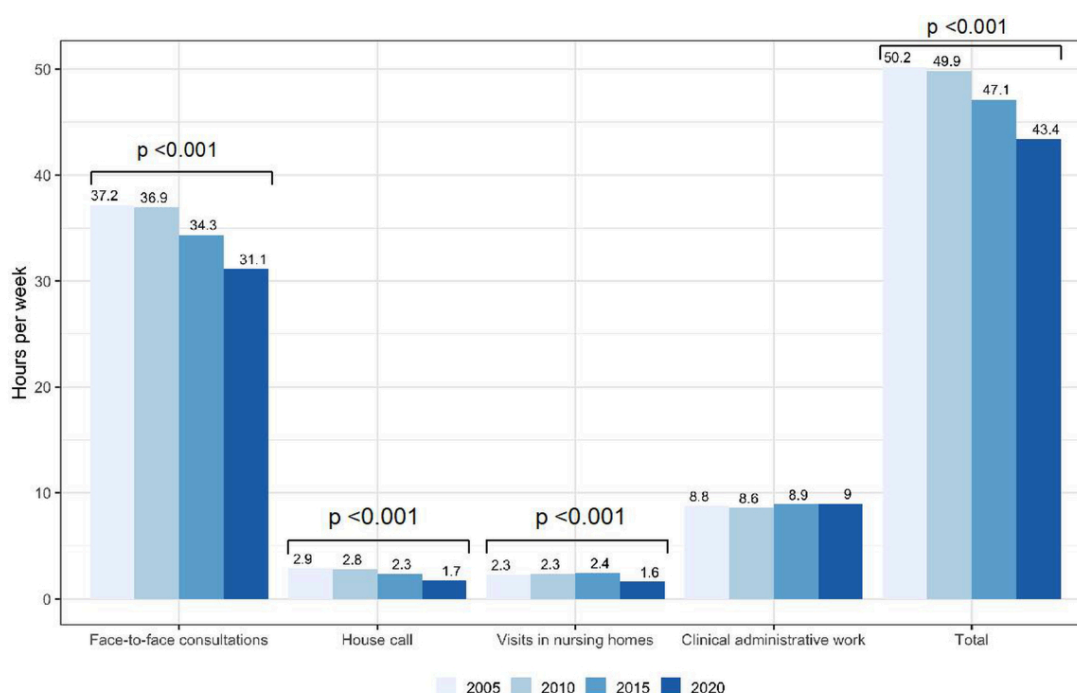
In this qualitative study, GPs spoke of the changing nature and additional challenges in general practice. An essential transformation of care in general practice is that patients have greater biomedical complexity from comorbidities and chronic conditions than has been the standard in the past. In general practice, a holistic, preventive and cost-effective approach in partnership with the patient is crucial. Realistically, such an approach needs time and cannot be achieved in short consultation slots. This is particularly true for consultations dealing with psychosocial issues, which can be time-consuming and also are emotionally challenging for the treating GP. Such aspects could also explain that the younger generation prefers to work part-time to recover from the time pressure during the working day at the practice and achieve a contented work-life balance. Reducing the number of consultations each day and thus expanding the consultation time per patient could be a possible strategy for gaining control over time to deal with patients presenting with numerous issues [28].

In contrast to our findings, in various countries, an increase in workload has been observed [1, 12, 13, 30]. In the UK, for example, the overall workload of GPs rose by 16% from 2007 to 2014 [30]. In particular, the number of consultations, the total number of patients and the duration of consultations increased during this period. For instance, the crude annual consultation rate per person increased by 10%, from 4.7 in 2007 to 2008, to 5.2 in 2013 to 2014, and the number of consultations significantly increased by 12% over the seven years. Plans to address this problem included reducing non-direct clinical workloads such as administrative work, increasing the number of GPs, strategies to reduce patients' health-seeking behaviour and improving the attractiveness of the profession [30]. The 2019 International Health Policy Survey (IHP) also recorded an increased proportion of GPs working 45 hours per week or more in several countries [31]. A particularly significant

increase was recorded in Norway (29%) [31]. The reasons most frequently cited by Norwegian GPs were increased bureaucracy related to documentation and management of a practice, changes in legislation, and changes in patient expectations and help-seeking behaviour [1]. For example, GPs experienced an increasing workload per patient and a shift of medical tasks from secondary to primary care as well as rising patient expectations about health services, treatment options, and their overall health and wellbeing [1].

In our survey, a relative increase in clinical administrative work over the years might be hypothesised since the time spent on face-to-face encounters decreased while the time for clinical administrative work remained stable. A relative increase in administrative work is worrisome and needs further attention since sound evidence exists that more administrative tasks are a risk factor for decreased job satisfaction and burnout of GPs [32, 33]. One solution to tackle the overload of administrative clinical work is that selected tasks carried out in general practice could be automated. Previous work in this area has looked at the opinions of GPs on automation. Blease et al. found that GPs were sceptical about the capacity of technology to replace or perform certain tasks in general practice better than humans [34]. Specifically, they see limited potential for automation in the areas of diagnosis, prognosis, personal treatment plans, referrals to other health professionals and empathetic care. In general, GPs must possess several key characteristics that are fundamental for high-quality patient care and cannot be replaced by robotic or IT-based processes. These include social intelligence, empathy, communication skills, creativity and improvisation. What is needed is to understand both the extent of automation in general practice using currently available technologies and to show which parts of the staff workflow and task list would be most amenable to automation. Automated solutions can

Figure 2: Workload in face-to-face consultations, house calls, visits to nursing homes, clinical administrative work, and total workload for years 2005–2020. P-values indicate significant ($p < 0.001$) workload changes across years within types of consultations.



improve accuracy, save time and increase capacity [34]. Wills et al. performed a mixed-methods study in six general practice health centres in England to assess the potential for automating administrative tasks [35]. The data collection included ethnographic case studies, focus groups, interviews and an online survey of automation experts. The authors found that roughly 44% of administrative tasks carried out by staff in general practice are mostly or completely automatable using currently available technology. The complete and quick replacement of paper-based medical records in general practices is crucial and urgent. This allows fast and easy access to pre-generated texts in desktop word processors or electronic medical record notes. Automated report generation and custom search queries to input patient data to different systems is another form of time-saving automation. Automation technologies are most useful when clinicians have the right information at the right time. Basic forms of automated telephone answering are already used, but more sophisticated systems are available that would enable a voice assistant to help triage the numerous phone calls that a practice can receive in a day [36]. Additionally, clinical documentation by GPs could benefit from automation. Artificial intelligence (AI) promises to accomplish this task by automating documentation [35]. Speech recognition and natural language processing technology can support the creation of notes in real time by listening in on patient–physician conversations [37, 38]. Further, during the note creation process, AI-enhanced decision support software can analyse a note’s content and provide real-time evidence-based recommendations to physicians (e.g. differential diagnosis, suggested evaluation, treatment guidelines) using dynamic clinical data mining [39]. Risk scores such as atherosclerotic cardiovascular disease to guide statin treatment or automated CHA₂DS₂-VASc score assessment to guide anticoagulation decisions can be calculated as part of note creation to augment clinical decision-making [40].

The results of the present study confirm the findings of a previous survey in Swiss general practice reporting an emerging feminisation and over-ageing of GPs and the fact that they are increasingly working in group practices [41]. Evidence from several European countries confirms this phenomenon [19, 20]. The average age of GPs in around 30 European countries rose from 44 to 51 years between 1993 and 2011, and the proportion of women rose from 44% to 61% [20]. Regarding the practice type, the UK is in first place with more than 90% group practices, ahead of the Netherlands with around 75% [19]. This shift towards group practices, more female GPs and part-time work also represents the “new generation” of GPs. Buddenberg-Fischer et al. described this new generation in 2008, who strive for a well-balanced integration of work and private life and therefore favour the model of part-time work [42]. Those GPs rate their intrinsic and extrinsic career motivation lower and extraprofessional concerns higher than former GPs who considered their profession as a vocation and sacrificed themselves for their patients [42]. Although previous studies showed that GPs had difficulties in balancing work and private life and were therefore at higher risk of developing burnout, [43–45] the trend of the new generation to work part-time could also be a reaction to the unhealthy overload of previous GPs [28, 42]. As we see in this study, not only women are responsible for this change

in working habits. Male GPs have also begun to reduce their workload. Although women, in contrast to men, still increasingly work part-time, this trend can now also be observed among men [46]. Already in 2019, FMH statistics showed that Swiss male physicians worked 8.7 half-days per week on average in ambulatory care. This is in line with the results of our survey and corresponds to a decrease of 0.4 half-days compared to the FMH data on workload published for the first time in 2008. Consequently, these changes among the new generation of GPs include an increasing number of female GPs working part-time, but also a trend of both female and male GPs paying greater attention to balancing their professional and private lives [42].

In the next ten years, around 56% of the GPs in Switzerland will retire due to age [47]. Consequently, the “old generation”, namely the male GP working full-time in a single practice, is considered to be a discontinued model. In recent years, several measures came into place to increase the number of GPs and improve the attractiveness of the profession in Switzerland [47]. For instance, more students were allowed to enter medical schools, and the remuneration of GPs was increased by legislative acts of the federal government [47]. However, the trend of young GPs working part-time remains and presumably will not change soon [26, 47]. Thus, the question must be emphasised of whether sufficient GPs in the future will ensure the population’s demand for primary care. This is particularly important given the ageing population and increasing number of patients suffering from chronic disease [48].

Strengths and limitations

A few caveats must be borne in mind. The sample in 2010 was a follow-up on the 2005 sample and not a new random sample from the total GP population as in 2015 and 2020. However, the impact on study objectives appears minor since data on GPs’ workload seems reliable if a similar sample is questioned at a five-year interval. The response rate was 34% in 2020, 36% in 2015, 71.7% in 2010 and 59% in 2005. Comprehensive reviews examining survey response rates within primary care literature have reported rates varying from 10.3% to 61% [49]. Thus, the response rates of the four surveys analysed are within expectable ranges, and the representativeness of the samples studied seems satisfactory to meet the objectives of the study. The sample size was different in the four surveys, ranging from 1,275 (in 2010) to 2,037 (in 2020). Despite this variation, the margin of error in the survey remains constant at $\pm 2\%$ at a 95% confidence interval, assuming a population size of 6,000 GPs in Switzerland. Notably, very scarce data exist on GPs’ workload in Switzerland, and the participants recruited for the four waves of this study represent the largest number of participants published yet. The data gathered is based on GPs’ self-report and therefore prone to over- or under-reporting. In our view, a substantial bias in the result seems unlikely. In general, GPs seem to have a genuine interest in providing reliable data, and thus also in contributing to empowering general practice in a political context.

Conclusions

The study demonstrates a decrease in GPs’ overall workload over time from 2005 to 2020, indicating that the new

generation of GPs prefers to work part-time. This decrease is at the expense of direct face-to-face encounters with patients (face-to-face consultations, house calls and nursing home visits). Over the last 15 years, a clear trend exists towards more women in Swiss general practice, persisting over-ageing of GPs, replacement of single-handed practices by group practices, and increasing burden of administrative tasks, a risk factor for burnout and reduced job satisfaction. To maintain an efficient healthcare system in the future, substantial efforts are crucial to provide a positive and motivating insight into general practice to pre- and postgraduate students and to improve the operational working conditions of GPs.

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Conflicts of interest

All authors have completed and submitted the International Committee of Medical Journal Editors form for disclosure of potential conflicts of interest. No potential conflict of interest was disclosed.

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References

- Svedahl ER, Pape K, Toch-Marquardt M, Skarshaug LJ, Kaspersen SL, Bjørngaard JH, et al. Increasing workload in Norwegian general practice - a qualitative study. *BMC Fam Pract*. 2019 May;20(1):68. <http://dx.doi.org/10.1186/s12875-019-0952-5>. PubMed. 1471-2296
- Schweizerisches Gesundheitsobservatorium. Konsultationen in Hausarzt- oder Allgemeinarztpraxen. <https://www.obsan.admin.ch/de/indikatoren/konsultationen-hausarzt-oder-allgemeinarztpraxen> [Accessed: 08-Feb-2021].
- Senn N, Ebert ST, Cohidon C, Diebold M. Analyses et perspectives sur la base des indicateurs du programme SPAM. *Obs Doss*. 2016;55.
- Wille N, Schlup J. Welches sind die wichtigsten Herausforderungen für die FMH. *Schweiz Arzteztg*. 2020;101(40):0036-7486
- OECD. WHO. OECD Reviews of Health Systems: Switzerland. 2011.
- Clausen F. Arztpraxen und ambulante Zentren 2017: Tätigkeit, Zugänglichkeit und räumliche Verteilung. Bundesamt für Stat. 2019.
- Jörg R, Lenz N, Wetz S, Widmer M. Ein Modell zur Analyse der Versorgungsdichte: herleitung eines Index zur räumlichen Zugänglichkeit mithilfe von GIS und Fallstudie zur ambulanten Grundversorgung in der Schweiz. *Schweizerisches Gesundheitsobservatorium (Obsan)*. 2019;(1):70.
- Osborn R, Squires D, Doty MM, Samak DO, Schneider EC. In New Survey of 11 Countries U.S. Adults Still Struggle with Access to and Affordability of Health Care. *Heal Aff Web*. 2016.
- Hostettler S, Kraft E. FMH-Ärzttestistik 2020 – die Schweiz im Ländervergleich. 2021;102(12):417-422.
- Kotecha S. GP shortages cause “unacceptable” patient waits. *BBC News* 2020 <https://www.bbc.com/news/health-51032691> [Accessed 09-Feb-2021].
- Thompson M, Walter F. Increases in general practice workload in England. *Lancet*. 2016 Jun;387(10035):2270–2. [http://dx.doi.org/10.1016/S0140-6736\(16\)00743-1](http://dx.doi.org/10.1016/S0140-6736(16)00743-1). PubMed. 1474-547X
- Crosbie B, O’Callaghan ME, O’Flanagan S, Brennan D, Keane G, Behan W. A real-time measurement of general practice workload in the Republic of Ireland: a prospective study. *Br J Gen Pract*. 2020 Jun;70(696):e489–96. <http://dx.doi.org/10.3399/bjgp20X710429>. PubMed. 1478-5242
- Schäfer WL, van den Berg MJ, Groenewegen PP. The association between the workload of general practitioners and patient experiences with care: results of a cross-sectional study in 33 countries. *Hum Resour Health*. 2020 Oct;18(1):76. <http://dx.doi.org/10.1186/s12960-020-00520-9>. PubMed. 1478-4491
- Ebert ST, Pittet V, Cornuz J, Senn N. Development of a monitoring instrument to assess the performance of the Swiss primary care system. *BMC Health Serv Res*. 2017 Nov;17(1):789. <http://dx.doi.org/10.1186/s12913-017-2696-z>. PubMed. 1472-6963
- Swiss Medical Association (FMH). FMH-Ärzttestistik. <https://www.fmh.ch/themen/aerzttestistik/fmh-aerzttestistik.cfm> [Accessed: 2-Mar-2021].
- Leung W-C. How to design a questionnaire Wai-Ching. 2006:1-9.
- Kraft E. 30 166 Ärztinnen und Ärzte versorgen die Schweizer Bevölkerung. *Schweiz Arzteztg*. 2010;91(11):431–5. <http://dx.doi.org/10.4414/saez.2010.15039>. 0036-7486
- Hostettler S, Kraft E. FMH-Ärzttestistik 2018: Wenig Frauen in Kaderpositionen. *Schweiz Arzteztg*. 2019;100(12):411–6. 0036-7486
- McCarthy M. Sustainable general practice: looking across Europe. *Br J Gen Pract*. 2016 Jan;66(642):36. <http://dx.doi.org/10.3399/bjgp16X683233>. PubMed. 1478-5242
- Groenewegen PP, Bosmans MW, Boerma WG, Spreeuwenberg P. The primary care workforce in Europe: a cross-sectional international comparison of rural and urban areas and changes between 1993 and 2011. *Eur J Public Health*. 2020 Sep;30 Suppl_4:iv12–7. <http://dx.doi.org/10.1093/eurpub/ckaa125>. PubMed. 1464-360X
- R Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. 2020.
- Wickham H, François R, Henry L, Müller K. dplyr: A Grammar of Data Manipulation. R package version 1.0.2. 2020.
- Wickham H. ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag New York. 2016.
- Venables WN, Ripley BD. Modern Applied Statistics with S. Fourth Edition. Springer, New York. ISBN 0-387-95457-0. 2002.
- Federal Statistical Office. Part-time employment in Switzerland 2017. 2019 https://www.bfs.admin.ch/bfs/en/home/news/whats-new/gnpdetail2019-0539.html#id_51833ec3d4c3d4b151da2e7a1094d872 [Accessed: 16-Mar-2021].
- Lindemann F, Laukenmann J, Kronenberg R, Streit S. Nachwuchsförderung – Auf gutem Weg, aber noch nicht am Ziel. *Prim Hosp Care*. 2019;19(9):275–7. 2297-7155
- Van den Bussche H. The future problems of general practice in Germany: current trends and necessary measures. *Bundesgesundheitsblatt - Gesundheitsforsch - Gesundheitsschutz*. 2019;62(9):1129-1137.
- Strazdins E, Dwan K, Pescud M, Strazdins L. Part-time in general practice-a remedy to a time-based problem? *Fam Pract*. 2019 Jul;36(4):511–5. <http://dx.doi.org/10.1093/fampra/cmy116>. PubMed. 1460-2229
- Dayan M, Arora S, Rosen R, Curry N. Is general practice in crisis? *Nuff Trust*. 2014;349.
- Hobbs FD, Bankhead C, Mukhtar T, Stevens S, Perera-Salazar R, Holt T, et al.; National Institute for Health Research School for Primary Care Research. Clinical workload in UK primary care: a retrospective analysis of 100 million consultations in England, 2007-14. *Lancet*. 2016 Jun;387(10035):2323–30. [http://dx.doi.org/10.1016/S0140-6736\(16\)00620-6](http://dx.doi.org/10.1016/S0140-6736(16)00620-6). PubMed. 1474-547X
- Pahud O. Ärztinnen und Ärzte in der Grundversorgung - Situation in der Schweiz und im internationalen Vergleich. Analyse des International Health Policy (IHP) Survey 2019 der amerikanischen Stiftung Commonwealth Funds im Auftrag des Bundesamtes für Gesundheit. *Schweizerisches Gesundheitsobservatorium (Obsan)*. 2019;15:160.
- Arigoni F, Bovier PA, Sappino AP. Trend of burnout among Swiss doctors. *Swiss Med Wkly*. 2010 Aug;140:w13070. PubMed. 1424-3997
- DeChant PF, Acs A, Rhee KB, Boulanger TS, Snowdon JL, Tutty MA, et al. Effect of Organization-Directed Workplace Interventions on Physician Burnout: A Systematic Review. *Mayo Clin Proc Innov Qual Outcomes*. 2019 Sep;3(4):384–408. <http://dx.doi.org/10.1016/j.mayocpiqo.2019.07.006>. PubMed. 2542-4548
- Blease C, Bernstein MH, Gaab J, Kapchuk TJ, Kossowsky J, Mandl KD, et al. Computerization and the future of primary care: A survey of general practitioners in the UK. *PLoS One*. 2018 Dec;13(12):e0207418. <http://dx.doi.org/10.1371/journal.pone.0207418>. PubMed. 1932-6203
- Willis M, Duckworth P, Coulter A, Meyer ET, Osborne M. Qualitative and quantitative approach to assess of the potential for automating administrative tasks in general practice. *BMJ Open*. 2020 Jun;10(6):e032412. <http://dx.doi.org/10.1136/bmjopen-2019-032412>. PubMed. 2044-6055
- Smits M, Hanssen S, Huibers L, Giesen P. Telephone triage in general practices: A written case scenario study in the Netherlands. *Scand J Prim Health Care*. 2016;34(1):28–36. <http://dx.doi.org/10.3109/02813432.2016.1144431>. PubMed. 1502-7724
- Klann JG, Szolovits P. An intelligent listening framework for capturing encounter notes from a doctor-patient dialog. *BMC Med Inform Decis Mak*. 2009;9 Suppl 1(Suppl 1):S3.
- Kreimeyer K, Foster M, Pandey A, Arya N, Halford G, Jones SF, et al. Natural language processing systems for capturing and standardizing unstructured clinical information: A systematic review. *J Biomed In-*

- form. 2017 Sep;73:14–29. <http://dx.doi.org/10.1016/j.jbi.2017.07.012>. PubMed. 1532-0480
39. Celi LA, Marshall JD, Lai Y, Stone DJ. Disrupting Electronic Health Records Systems: The Next Generation. *JMIR Med Inform*. 2015 Oct;3(4):e34. <http://dx.doi.org/10.2196/medinform.4192>. PubMed. 2291-9694
40. Chen JH, Asch SM. Machine Learning and Prediction in Medicine - Beyond the Peak of Inflated Expectations. *N Engl J Med*. 2017 Jun;376(26):2507–9. <http://dx.doi.org/10.1056/NEJMp1702071>. PubMed. 1533-4406
41. Cohidon C, Cornuz J, Senn N. Primary care in Switzerland: evolution of physicians' profile and activities in twenty years (1993-2012). *BMC Fam Pract*. 2015 Aug;16(1):107. <http://dx.doi.org/10.1186/s12875-015-0321-y>. PubMed. 1471-2296
42. Buddeberg-Fischer B, Stamm M, Buddeberg C, Klaghofer R. The new generation of family physicians—career motivation, life goals and work-life balance. *Swiss Med Wkly*. 2008 May;138(21-22):305–12. PubMed. 1424-7860
43. Biaggi P, Peter S, Ulich E. Stressors, emotional exhaustion and aversion to patients in residents and chief residents - what can be done? *Swiss Med Wkly*. 2003 Jun;133(23-24):339–46. PubMed. 1424-7860
44. Goehring C, Bouvier Gallacchi M, Künzi B, Bovier P. Psychosocial and professional characteristics of burnout in Swiss primary care practitioners: a cross-sectional survey. *Swiss Med Wkly*. 2005 Feb;135(7-8):101–8. PubMed. 1424-7860
45. Voltmer E, Kieschke U, Spahn C. Work-related behaviour and experience patterns of physicians compared to other professions. *Swiss Med Wkly*. 2007 Aug;137(31-32):448–53. PubMed. 1424-7860
46. Thier J. Wohlstandsproblem - Teilzeitarbeit. *Neue Zürcher Zeitung* 2015 <https://www.nzz.ch/wissenschaft/bildung/wohlstandsproblem-teilzeitarbeit-118574855> [Accessed 04-Mar-2021].
47. Hügli-Jost S. Medienmitteilung: Workforce-Studie zur medizinischen Grundversorgung: Hausärztemangel – aber mit Licht am Horizont. mfe, Haus- und Kinderärzte Schweiz. 2020.
48. Josi R, De Pietro C. Skill mix in Swiss primary care group practices - a nationwide online survey. *BMC Fam Pract*. 2019 Mar;20(1):39. <http://dx.doi.org/10.1186/s12875-019-0926-7>. PubMed. 1471-2296
49. Booker QS, Austin JD, Balasubramanian BA. Survey strategies to increase participant response rates in primary care research studies. *Fam Pract*. 2021 Sep;38(5):699–702. <http://dx.doi.org/10.1093/fampra/cmab070>. PubMed. 1460-2229

4. Erhebung der Work Force Hausarztmedizin Schweiz 2020

Liebe Kolleginnen und Kollegen

- Dürfen wir sie höflich bitten, den folgenden Fragebogen auszufüllen und damit einen sehr wertvollen Beitrag zur Stärkung der Schweizer Hausarztmedizin zu leisten.
- Das universitäre Zentrum für Hausarztmedizin der Uni Basel bedankt sich bereits jetzt für Ihre sehr wichtige Unterstützung.
- Die Rücksendemodalitäten finden Sie am Schluss des Fragebogens



A) Fragen zur Arbeitszeit und Arbeitsbelastung Praxisöffnungszeit / Arbeitszeiten pro Woche im Jahre 2019	
1. Wie viele Halbtage pro Woche haben Sie Sprechstunde? (100% = 10 Halbtage)	<input type="text"/> <input type="text"/> Halbtage/Woche
2. Machen Sie Hausbesuche?	<input type="checkbox"/> ja <input type="checkbox"/> nein
3. Betreuen Sie Patienten in Alters- oder Pflegeheimen?	<input type="checkbox"/> ja <input type="checkbox"/> nein
4. Wie viel Prozent Ihrer Arbeitszeit pro Woche widmen Sie administrativen Arbeiten (geschätzt)?	<input type="text"/> <input type="text"/> Prozent
5. Wie viele Patienten sehen Sie im Schnitt pro Woche?	<input type="text"/> <input type="text"/> <input type="text"/> Patienten/Woche
6. Wie lange planen sie eine normale Konsultation?	<input type="text"/> <input type="text"/> Minuten
7. Wie viele Wochen Ferien hatten Sie 2019? (d.h. keine Sprechstunde)	<input type="text"/> <input type="text"/> Wochen
Notfalldienst im Jahr 2019 (Achtung bitte das ganze Jahr bis Ende Dezember 2019 berücksichtigen)	
8. Leisten Sie Notfalldienst ausserhalb der Sprechzeiten?	<input type="checkbox"/> ja <input type="checkbox"/> nein
9. Sind Sie für Ihre Praxis-Patienten ausserhalb der Arbeitszeiten für einen Einsatz (Praxis, Haus-, Alters-, Pflegeheimbesuch, etc.) erreichbar?	<input type="checkbox"/> ja <input type="checkbox"/> nein

Berufliche Nebentätigkeiten im Jahr 2019 (Achtung: bitte das GANZE Jahr 2019 bis Ende Dezember berücksichtigen!)	
10. Sind Sie aktiv in der studentischen Lehre? (z. Bsp. Gruppenunterricht, Co-Examinator Staatsexamen, Vorlesungen, Einzeltutoriat,...)	<input type="checkbox"/> ja <input type="checkbox"/> nein
11. Betreuen Sie Studenten in Ihrer Praxis	<input type="checkbox"/> ja <input type="checkbox"/> nein
12. Weiterbildung von Assistenzärzten/-innen in der eigenen Praxis (Praxisassistenz)	<input type="checkbox"/> ja <input type="checkbox"/> nein
13. Sind Sie bei einem Institut für Hausarztmedizin assoziiert?	<input type="checkbox"/> ja <input type="checkbox"/> nein
14. Haben Sie während den letzten 3 Jahren an hausärztlichen Forschungsprojekten mitgearbeitet?	<input type="checkbox"/> ja <input type="checkbox"/> nein

15. Falls nein: Hätten Sie Interesse, sich an hausärztlicher Forschung in der Praxis für die Praxis zu beteiligen?	<input type="checkbox"/> ja <input type="checkbox"/> nein
16. Falls ja: Was war/ist Ihnen dabei wichtig:	
16.1. Angemessene Honorierung.	<input type="checkbox"/> ja <input type="checkbox"/> nein
16.2. Gewünschter Stundenansatz	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> CHF/h
16.3. Persönliches Interesse an Fragestellung	<input type="checkbox"/> ja <input type="checkbox"/> nein
16.4. Geringer Aufwand	<input type="checkbox"/> ja <input type="checkbox"/> nein
16.5. Zeitlich vereinbar mit Praxis	<input type="checkbox"/> ja <input type="checkbox"/> nein
17. Würden Sie zu Forschungszwecken medizinischen Routinedaten aus elektronischen Krankengeschichten Ihrer Patienten anonymisiert weitergeben?	<input type="checkbox"/> ja <input type="checkbox"/> nein
18. Haben Sie während den letzten 3 Jahren an von der Industrie gesponserten Forschungsprojekten mitgearbeitet?	<input type="checkbox"/> ja <input type="checkbox"/> nein
19. Wie ist Ihre Meinung zur Forschung in der Hausarztmedizin in der Schweiz? Braucht es Forschung in der Hausarztpraxis in der Schweiz?	<input type="checkbox"/> überhaupt nicht <input type="checkbox"/> nicht nötig <input type="checkbox"/> nötig <input type="checkbox"/> unbedingt nötig

Subjektives Empfinden der Arbeitsbelastung, berufliche Zufriedenheit					
Wie sehr treffen folgende Aussagen auf Sie zu? Kreuzen Sie eine Antwort pro Linie an	gar nicht	sehr wenig	wenig	stark	sehr stark
20. Sind Sie für die Zukunft der Hausarztmedizin optimistisch?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Sind Sie zufrieden mit Ihrer Arbeitsbelastung?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Wenn Sie heute mit dem Studium nochmals beginnen könnten, würden Sie wieder den Arztberuf ergreifen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Haben sich in Ihren Augen die Arbeitsbedingungen der Hausärzte in den letzten 5 Jahren verbessert?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Wie zufrieden sind Sie, wenn Sie Ihre Arbeitssituation insgesamt betrachten?	<input type="checkbox"/> ausserordentlich unzufrieden <input type="checkbox"/> sehr unzufrieden <input type="checkbox"/> ziemlich unzufrieden <input type="checkbox"/> teils-teils <input type="checkbox"/> ziemlich zufrieden <input type="checkbox"/> sehr zufrieden <input type="checkbox"/> ausserordentlich zufrieden
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Konkrete Pläne betreffend Ihrem zukünftigen beruflichen Engagement	
25. Planen Sie, Ihre Arbeitszeit in der Praxis zu reduzieren? <div style="text-align: right; margin-right: 20px;">25.1. In welchem Alter</div> 25.2. Um wie viele Halbtage pro Woche möchten Sie Ihre Arbeitszeit reduzieren? (100%=10 Halbtage)	<input type="checkbox"/> ja <input type="checkbox"/> nein <input type="text"/> <input type="text"/> Jahre <input type="text"/> <input type="text"/> Halbtage/Woche
26. Möchten Sie Ihre Praxistätigkeit vor dem Erreichen des 65. Lebensjahres aufgeben? <div style="text-align: right; margin-right: 20px;">26.1. In welchem Alter?</div>	<input type="checkbox"/> ja <input type="checkbox"/> nein <input type="text"/> <input type="text"/> Jahre
27. Möchten Sie auch nach dem Erreichen des 65. Lebensjahres in der Praxis aktiv sein? <div style="text-align: right; margin-right: 20px;">27.1. Bis in welches Alter?</div>	<input type="checkbox"/> ja <input type="checkbox"/> nein <input type="text"/> <input type="text"/> Jahre



More than half done!

☐) Fragen zur Praxisstruktur

28. Bezeichnen Sie bitte Ihren Praxistyp:	<input type="checkbox"/> Einzelpraxis <input type="checkbox"/> Doppelpraxis <input type="checkbox"/> Gruppenpraxis <input type="checkbox"/>
29.1 Bei Gruppenpraxen: Wie viele Arztpersonen?	<input type="checkbox"/> <input type="checkbox"/>
29. Postleitzahl Ihres Praxisstandortes:	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
30. Verwenden Sie nur eine elektronische KG?	<input type="checkbox"/> ja <input type="checkbox"/> nein
31. Verwenden Sie elektronische und Papier-KGs?	<input type="checkbox"/> ja <input type="checkbox"/> nein
32. Verwenden sie nur Papier-KG	
33. Haben Sie aus der Praxis heraus direkten Zugang zu elektronischen Daten Ihrer Patienten im Spital?	<input type="checkbox"/> ja <input type="checkbox"/> nein
34. Haben Sie ein Röntgengerät in Ihrer Praxis?	<input type="checkbox"/> ja <input type="checkbox"/> nein
35. Haben Sie eine Apotheke in Ihrer Praxis? (Selbstdispensation)	<input type="checkbox"/> ja <input type="checkbox"/> nein
36. Bieten Sie Ultraschalluntersuchungen an in Ihrer Praxis?	<input type="checkbox"/> ja <input type="checkbox"/> nein

C: Fragen zu Ihrer Person

37. Ihr Geburtsjahr?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
38. Ihr Geschlecht?	<input type="checkbox"/> weiblich <input type="checkbox"/> männlich
39. In welchem Jahr begann Ihre Praxistätigkeit?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
40. Wie ist ihr Erwerbsstatus?	<input type="checkbox"/> Selbstständig Erwerbender (via Tarmed) <input type="checkbox"/> in Anstellungsverhältnis
41. Haben Sie einen Facharzttitel?	<input type="checkbox"/> Allgemeine Innere Medizin <input type="checkbox"/> EU-Titel äquivalent der FMH <input type="checkbox"/> anderes ausländisches Facharzt-Diplom (ausserhalb EU)

☐ : Fragen zur Gesundheitspoliti

42. Besteht ein Hausarztmangel in Ihrer Region?	<input type="checkbox"/> ja <input type="checkbox"/> nein
43. Machen Sie sich Sorgen um die Nachfolge resp. Übergabe Ihrer Praxis?	<input type="checkbox"/> ja <input type="checkbox"/> ne
44. Was halten Sie vom „Sonderprogramm Humanmedizin“? „Mit dem Ziel einer zusätzlichen Beschleunigung der Erhöhung der Anzahl Studienplätze in Humanmedizin hat der Bundesrat die Förderung der Humanmedizinusbildung als Schwerpunkt in die „Bildung Forschung Innovation“-Botschaft 2017-2020 aufgenommen. Mittels einer projektorientierten Sonderfinanzierung über 100 Mio. Franken wurde ein anreizorientiertes Sonderprogramm lanciert die voraussichtlich zu jährlichen 1350 Abschlüssen in Humanmedizin bis 2025 führen.“	<input type="checkbox"/> sinnvoll <input type="checkbox"/> nicht sinnvoll <input type="checkbox"/> genug unternommen <input type="checkbox"/> noch nicht genug unternommen

Kommentare

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Vielen Dank für Ihre Teilnahme!

- Bitte senden sie den Fragebogen im beigelegten, vorfrankierten und adressierten Couvert zurück an uns.
- Wir garantieren Ihnen, dass die Daten anonym behandelt werden. Nur das Studienteam hat Zugriff auf die Daten.
- Nochmals herzlichen Dank! Wir planen die Befragung nach 2005, 2010, 2015 und jetzt 2025 erneut durchzuführen.

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