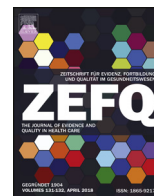




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Qualität und Sicherheit in der Gesundheitsversorgung / Quality and Safety in Health Care

The impact of the COVID-19 pandemic on professional practice and patient volume in medical practices: A survey among German physicians and psychotherapists



*Auswirkungen der COVID-19-Pandemie auf die Versorgung und das Patientenaufkommen in ambulanten Praxen: eine Umfrage unter deutschen Ärzt*innen und Psychotherapeut*innen*

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ARTICLE INFO

Article History:

Received: 5 May 2021

Received in revised form: 9 July 2021

Accepted: 2 August 2021

Available online: 30 August 2021

Keywords:

COVID-19

Physicians

Psychotherapists

Patient volume

Telehealth

Health services research

ABSTRACT

Introduction: This study examines the consequences of the COVID-19 pandemic on outpatient care in the German federal state of Brandenburg during the first 'lockdown' between 22 March and 4 May 2020, focusing on the burden for physicians and psychotherapists in outpatient practices and on alternative ways to provide care, in particular telehealth.

Methods: We conducted an online cross-sectional survey among outpatient health care professionals. The responses of $n = 277$ physicians and $n = 87$ psychotherapists were included in the analysis. Frequencies are shown; the relationship between categorical variables was examined using the χ^2 test; we used a qualitative content analysis for free text answers.

Results: Almost all (96%) physicians and 59% of the psychotherapists reported a patient volume reduction since the COVID-19 outbreak. Cancellations were most often initiated by patients rather than physician offices. Among the physicians, routine check-ups and preventive care consultations were cancelled most frequently, and patients also appeared less frequently in open consultations. 72% of the physicians and 29% of the psychotherapists reported economic losses. While personal patient-physician contact was reduced, the use of telehealth has increased since the COVID-19 outbreak: during the first 'lockdown', two thirds of the psychotherapists (66%) and 14% of the physicians used telehealth for the first time. The COVID-19 pandemic contributed to a positive change in attitudes towards telehealth; this trend was significantly stronger among psychotherapists than among physicians.

Discussion: The reduction in patient volume shown in this study is confirmed by outpatient billing data analyses. Clinical routines changed due to COVID-19 and led to a growth in telehealth usage. By facilitating formal billing options, the increased use of telehealth can also be promoted after the pandemic.

Conclusion: Shortly after the COVID-19 outbreak, outpatient physicians and psychotherapists were faced with various challenges: Through their spontaneous and flexible response to the COVID-19 pandemic, outpatient providers were able to maintain their work despite high stress levels. Telehealth is becoming more important as a result of COVID-19.

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ARTIKEL INFO

Artikel-Historie:

Eingegangen: 5. Mai 2021

Revision eingegangen: 9. Juli 2021

Akzeptiert: 2. August 2021

Online gestellt: 30. August 2021

Schlüsselwörter:

COVID-19

Ärzt*innen

Psychotherapeut*innen

Patientenaufkommen

Telemedizin

Gesundheitsversorgungsforschung

ZUSAMMENFASSUNG

Einleitung: Die Studie untersucht die Auswirkungen der COVID-19-Pandemie auf die ambulante Versorgung im Land Brandenburg während des ersten Lockdowns zwischen dem 22. März und dem 4. Mai 2020. Der Fokus liegt dabei auf der Belastung für Ärzt*innen und Psychotherapeut*innen in ambulanten Praxen sowie auf alternativen Versorgungsmöglichkeiten, insbesondere der Telemedizin.

Methoden: Es wurde eine onlinebasierte Querschnittsbefragung unter ambulanten Leistungserbringern durchgeführt. Die Antworten von n=277 Ärzt*innen und n=87 Psychotherapeut*innen wurden in die Analyse einbezogen und deskriptiv in Form von Häufigkeiten dargestellt. Der Zusammenhang zwischen kategorialen Variablen wurde mit dem χ^2 -Test untersucht; Freitextantworten wurden mittels einer qualitativen Inhaltsanalyse ausgewertet.

Ergebnisse: Fast alle (96 %) Ärzt*innen und 59 % der Psychotherapeut*innen berichteten über eine Reduktion des Patientenaufkommens seit dem Ausbruch von COVID-19. Terminabsagen wurden am häufigsten von Patient*innen und nicht von den Praxen initiiert. Bei den Ärzt*innen wurden Routinekontrollen und Vorsorgetermine am häufigsten abgesagt, und auch in den offenen Sprechstunden erschienen die Patient*innen seltener. 72 % der Ärzt*innen und 29 % der Psychotherapeut*innen berichteten wirtschaftliche Verluste. Während der persönliche Arzt-Patienten-Kontakt reduziert wurde, nahm die Nutzung von Telemedizin seit dem COVID-19-Ausbruch zu: Zwei Drittel der Psychotherapeut*innen (66%) und 14 % der Ärzt*innen nutzten Telemedizin zum ersten Mal während des ersten Lockdowns. Die COVID-19-Pandemie trug zu einer positiven Veränderung der Einstellung gegenüber Telemedizin bei, signifikant stärker bei Psychotherapeut*innen als bei Ärzt*innen.

Diskussion: Die hier aufgezeigte Reduktion des Patientenaufkommens wird durch ambulante Abrechnungsdatenanalysen bestätigt. Die klinischen Versorgungsroutinen haben sich aufgrund der COVID-19-Pandemie verändert und führten zu einer verstärkten Nutzung von Telemedizin. Durch Erleichterung der formalen Abrechnungsmöglichkeiten kann auch nach der Pandemie der verstärkte Einsatz von Telemedizin gefördert werden.

Schlussfolgerung: Ambulant tätige Ärzt*innen und Psychotherapeut*innen standen kurz nach Ausbruch von COVID-19 vor verschiedenen Herausforderungen: Durch ihre spontane und flexible Reaktion auf die Pandemie konnten die ambulanten Leistungserbringer ihre Arbeit trotz hoher Belastungen aufrechterhalten. Die Telemedizin gewinnt infolge der COVID-19-Pandemie an Bedeutung.

Introduction

The COVID-19 outbreak initially emerged as a regional epidemiological incident and rapidly turned into a global multidimensional crisis. On 11 March 2020, the World Health Organization declared COVID-19 a pandemic [1]. Since then, national governments have pursued different strategies to contain the pandemic and to strengthen their health systems [2].

Recent study results indicate that outpatient health care is of particular importance during pandemic control [3]. In Germany between February and May 2020, 80–85% of COVID-19 infected patients were diagnosed and treated in outpatient health care, unlike the situation in several other EU countries [3–5]. As a result, fewer COVID-19 patients are entering hospitals, which are known to represent hot-spots where the pandemic is spreading faster owing to close personal contacts [3,6,7]. Aside from the personal risk of attracting infection [8], COVID-19 poses various challenges for outpatient physicians and psychotherapists. These involve implementation of protection and education measures, procurement of protective equipment, absence of patients, potential financial losses and, in consequence, drastic changes in day-to-day routines [9,10].

On 27 March 2020 the German government issued the COVID-19 Hospital Relief Act [11]. In addition to financial support for hospitals and the increase of intensive care capacity, the law also aims at outpatient care. Two of the legislations adopted concern the compensation of outpatient physicians and psychotherapists in the event of patient absence and the financing of extraordinary measures [11]. In a separate act, the utilization of telehealth, in particular phone and video consultations, was stimulated by removal of previous numerical caps and more generous remuneration [12].

This study investigates the consequences of COVID-19 pandemic on physicians and psychotherapists in outpatient practices in the predominantly sparsely populated German state of Brandenburg. The study addresses the following research questions:

- To what extent did the COVID-19 pandemic affect outpatient health care?
- Which were specific strains faced by specialist physicians, general practitioners and psychotherapeutic practices during the first 'lockdown' of the COVID-19 pandemic in Germany between 22 March and 4 May 2020?
- Did COVID-19 change the attitude of physicians and psychotherapists towards telehealth?

Methods*Sample*

An anonymous cross-sectional study was performed in the German federal state of Brandenburg, a state of 2.5 Million inhabitants and with a low physician density [13]. In all, 4,115 physicians and 677 psychotherapists are registered with the Association of Statutory Health Insurance Physicians Brandenburg ('KVBB') and provide outpatient health services covered by the statutory health insurance.

All 4,792 healthcare professionals were invited to participate in an online survey. Physicians and psychotherapists were contacted by post via the KVBB and received a link to access the online survey. After two weeks, a reminder email was sent to all eligible professionals for whom a valid email address was available (n=3,007). Data collection started on 5 June 2020 and ended on 15 July 2020.

Questionnaire

We developed and piloted a questionnaire instrument to assess potential impact of the COVID-19 pandemic on patient volume, emotional and financial burden, job changes, health care system changes, as well as professionals' attitudes towards their work during the pandemic, information need, availability of information and

Table 1
Characteristics of participants (physicians and psychotherapists).

	Characteristics	Participants (n = 364)	
		n	%
1	Population density (No. of inhabitants)		
	<5000	44	12%
	5000 < 20.000	131	37%
	20.000 < 100.000	134	38%
	≥100.000	48	13%
	Missing	7	
2	Professional group		
	Psychotherapist	87	24%
	Physician	277	76%
3	Type of practice		
	General/Family medicine	140	51%
	Specialist	137	49%
4	No. of practice employees		
	0-1	80	22%
	2-4	192	54%
	5-9	63	18%
	≥10 ^a	22	6%
	Missing	7	

^a Includes 4 clinics with more than 50 employees.

telehealth during the first 'lockdown' of the COVID-19 pandemic in Germany between 22 March and 4 May 2020.

The items were developed in a first version by the researchers based on the research question. Some of the potential challenges in outpatient care were known from the ZWEIT project [14], in which the researchers cooperate closely with practising physicians. Then, the questionnaire was discussed and piloted with two physicians affiliated with outpatient practices. The participating physicians reported on clarity of wording, on completeness of the response-categories of the closed items and specifically on whether any relevant consequences of the COVID-19 pandemic for the practice should be added. In addition, the questionnaire was reviewed and adapted by employees of the Association of Statutory Health Insurance Physicians Brandenburg. The questionnaire was modified according to the respective suggestions.

Analysis

We used quantitative descriptive analysis for the questionnaires (SPSS version 23.0) and qualitative content analysis for the free text responses (MAXQDA version 20.0.8). Descriptive data were analysed using absolute and relative frequencies. The relationship between categorical variables was examined using the χ^2 test with a significance level $\alpha = 0.05$, except for cells with < 5 observations. The frequencies of free text responses per item analysed are shown in the supplemental material (Appendix A, Table S1).

Results

4,792 physicians and psychotherapists were contacted between 5 June and 15 July 2020. Of the 396 responses, 32 were excluded from further analysis because fewer than half of the questions were answered. 364 (8%) responses were included in the analysis. Further sample characteristics are presented in Table 1. Part of the results are shown in Table 2.

Changes in patterns of demand

Nearly all physicians (96%) and more than half of the psychotherapists (59%) reported a lower patient volume since the start of the COVID-19 outbreak (χ^2 -Test, < 0.001) (Table 2). Cancellations were most often initiated by patients (78%) rather than physician offices (22%). If the cancellation was patient-initiated, the most

commonly reported reasons included fear of infection and a general sense of insecurity, both mentioned by about 60% of psychotherapists and 80% of physicians (results not shown in tables).

Among physicians, routine check-ups and preventive care consultations were cancelled most frequently and patients also appeared less frequently in open consultations (Appendix A, Figure S1). Psychotherapists reported that patients most often cancelled psychotherapy sessions (Appendix A, Figure S2). Psychotherapy sessions were most often called off by patients with anxiety disorders, while in the physician's office, patients with chronic diseases most often cancelled appointments (Appendix A, Figure S3 and S4). The age group between 60 and 79 particularly often avoided outpatient medical care (Appendix A, Figure S5).

In addition, participants reported on the adjustment of care pathways. Patient visits to medical practices to pick up prescriptions in person decreased. Instead, the prescription was increasingly sent by post (Appendix A, Figure S6).

The qualitative analysis of free text entries (Appendix A, Table S2) provides information on the consequences of the reduced use of outpatient care from the physician's perspective: physicians expect delayed treatment of patients due to patients' avoidance of medical practices during the pandemic. The respondents reported that important check-ups for patients with chronic diseases were cancelled. In addition, a decline in requests for precautionary measures was observed, which the participating physicians believe could have negative long-term consequences. The surveyed physicians also stated that appointments to check medication adherence were not kept, which in turn had a negative impact on adherence. Furthermore, participants expect underdiagnosis of oncological conditions. According to respondents, these aspects may likely lead to a shortage of adequate health care and an increase in morbidity in the future.

Routines during COVID-19

Three quarters of general practitioners (104 of 140; 74%) performed COVID-19 testing. General practitioners performed COVID-19 tests and treated COVID-19 patients significantly more often than specialists (χ^2 -Test, < 0.001). Increased infection control measures have been in place since the COVID-19 pandemic: however, more than two thirds of the physicians (68%) and more than half of the psychotherapists (56%) reported that the required protection material was not sufficiently available during the first

Table 2
Results (physicians vs. psychotherapists).

		All participants (n = 364)		Physicians (n = 277)		Psychotherapists (n = 87)	
		n	%	n	%	n	%
1	Change in patient volume						
	Less patients	316	87%	265	96%	51	59%
	Unchanged or more patients	48	13%	12	4%	36	41%
	Missing	0		0		0	
2	Source of cancellation ^a						
	Cancellation by physician's office	70	22%	63	24%	7	14%
	Cancellation by patients	246	78%	202	76%	44	86%
	Missing	0		0		0	
3	Economic losses						
	Yes	224	62%	199	72%	25	29%
	No	140	38%	78	28%	62	71%
	Missing	0		0		0	
4	Perceived risk of infection						
	None to low risk of infection	157	44%	108	40%	49	57%
	Medium to high risk of Infection	192	54%	159	59%	33	38%
	Cannot answer	8	2%	4	1%	4	5%
	Missing	7		6		1	
5	Concern for one's own health						
	Not or little concerned	247	69%	179	66%	68	79%
	Worried or very worried	106	30%	88	32%	18	21%
	Cannot answer	4	1%	4	1%	0	
	Missing	7		6		1	
6	Use of telehealth						
	Yes, for the first time since COVID-19	96	27%	39	14%	57	66%
	Yes, to a similar extent as before COVID-19	14	4%	13	5%	1	1%
	Yes, more since COVID-19	30	8%	21	8%	9	11%
	No	217	61%	198	73%	19	22%
	Missing	7		6		1	
7	Change of attitudes towards telehealth						
	No change in attitude to telehealth	203	57%	175	65%	28	33%
	Positive change in attitude to telehealth	143	40%	89	33%	54	63%
	Negative change in attitude to telehealth	11	3%	7	3%	4	5%
	Missing	7		6		1	

^a Sub-analysis for participants who had fewer patients in the period from 22 March 2020 to 04 May 2020.

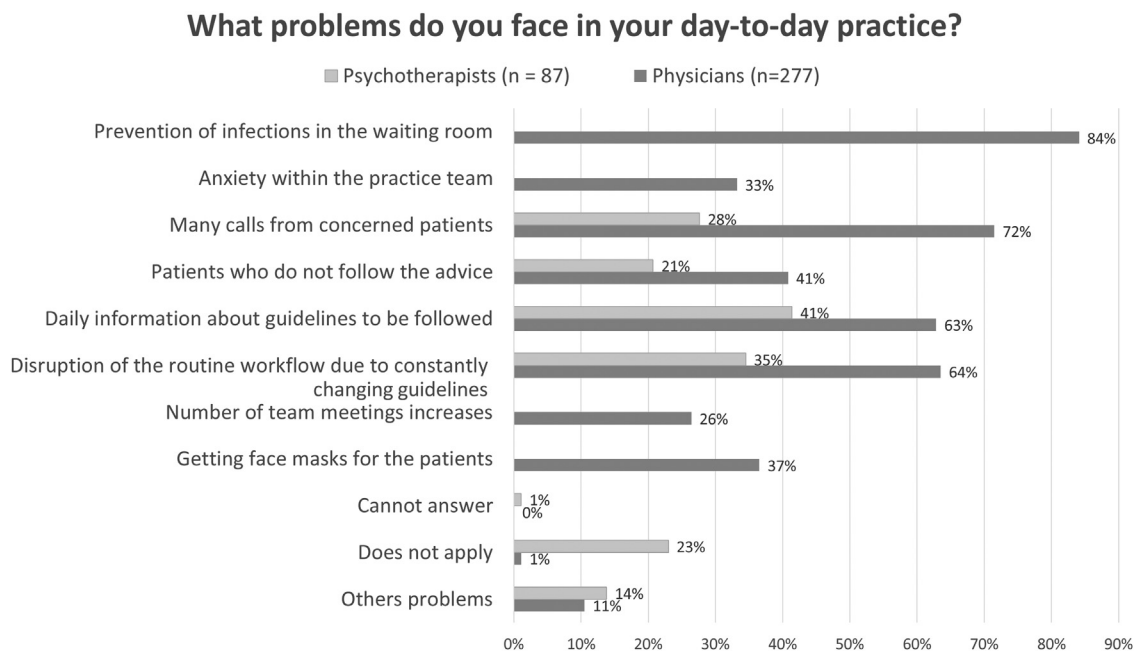


Figure 1. Problems of physicians and psychotherapists in day-to-day practice during first 'lockdown'.

'lockdown' (results not shown in tables). Among the physicians who had a lack of protection material, 77% stated a moderate to high impairment of their personal feelings and 68% stated a moderate to high level of impairment of their everyday practice as a result. As shown in Figure 1, other problems in the daily routine included

the additional efforts to avoid infections in the waiting room (84%), increased numbers of calls from concerned patients (72%), daily information about guidelines to be followed (63%) and disruption of the routine workflow due to constantly changing guidelines (64%). Participants reported on positive effects as well: 58% of the

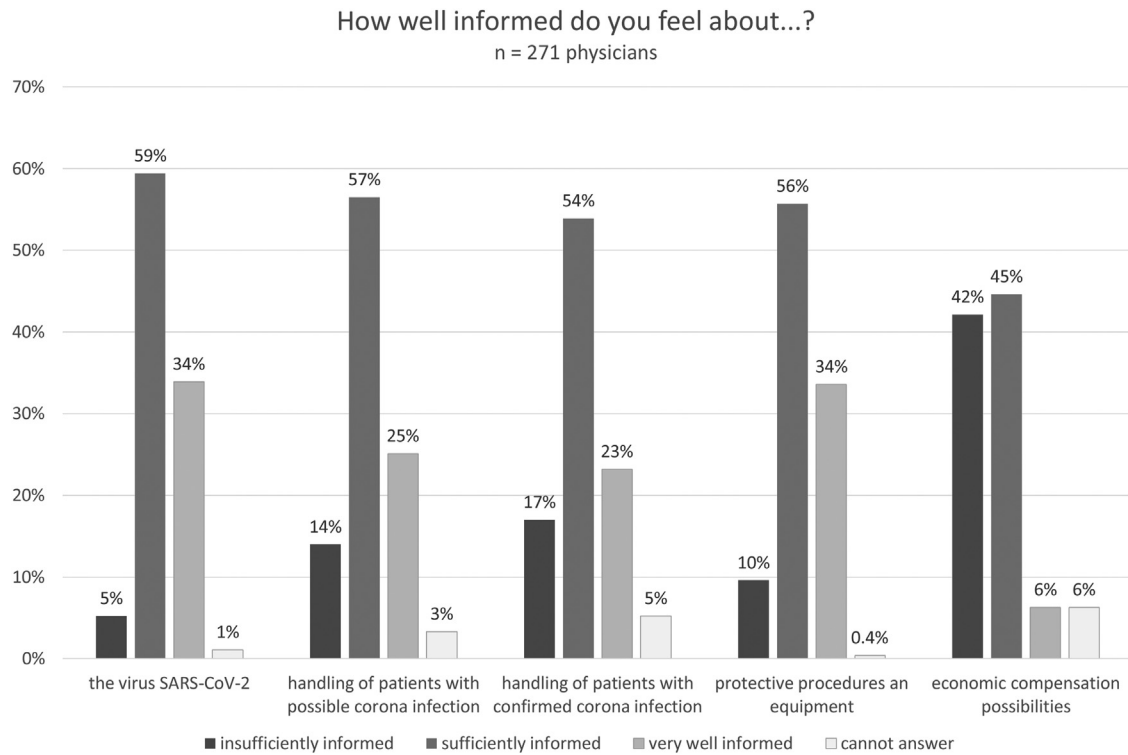


Figure 2. Physicians satisfaction with information related to the COVID-19 pandemic.

physicians reported that they have more time for their patients and shorter waiting periods for patients with acute medical issues.

Psychotherapists most frequently informed themselves about SARS-CoV-2 regarding their own practical work via the Association of Statutory Health Insurance Physicians (88%), communication with colleagues (78%), the professional association or the professional society (63%) and the Robert Koch Institute (51%). Physicians most frequently informed themselves via the Robert-Koch-Institute (84%), the Association of Statutory Health Insurance Physicians (64%) and the exchange with colleagues (59%) (Appendix A, Figure S7). Figure 2 provides an overview of how well informed physicians felt about various topics related to the COVID-19 pandemic.

The patterns of changes in everyday practice due to infection control were confirmed and specified in free text entries (see Appendix A, Table S3). For instance, this includes organisation of waiting rooms in medical practices, which has consequences on the daily organisation:

“More focus on hygiene (disinfectants for hands and surfaces), touchless soaps and disinfectant dispensers, more self-care (no more working when you have cold symptoms, which used to be a matter of course), maybe continuing to not shake hands. (Participant 65)

Participants reported that working under infection control guidelines was straining:

“The daily work with prescribed protective clothing by the RKI [Robert Koch Institute] under summer temperatures represents a special challenge for physicians and staff. Counselling, physical work and breathing under FFP1/2 masks is hard work, especially for colleagues and nurses who are over 60 years old!” (Participant 100)

Conversion to telehealth

Two thirds of the psychotherapists (66%) and 14% of the physicians have practiced telehealth for the first time since the COVID-19 outbreak. Psychotherapists use telehealth significantly more frequently than physicians (χ^2 -Test, <0.001). Psychotherapists most frequently offer video consultations; physicians most frequently offer phone consultations. Forty-six percent of the psychotherapists and 36% of the physicians rated the use of telehealth treatment as successful and 15% of both professions as less or not at all successful. The most frequent barriers reported, were the patients lacking solid internet connectivity and patients' lack of competence in using the technology. Twenty-two percent of the psychotherapists and 73% of the physicians did not offer telehealth. The most common reason given by participants was that telehealth could not add to or replace personal treatments (Figure 3). Compared to physicians, psychotherapists have changed their attitude towards telehealth positively since the COVID-19 pandemic (χ^2 -Test, <0.001). In the free text responses, participants expressed disadvantages of the switch to telehealth:

“Effort of implementation etc. is currently not economical on balance.” (Participant 270)

“...and what needs to be looked at usually needs be able to be touched as well.” (Participant 62)

Emotional & financial burden

Physicians rated their risk of infection higher than psychotherapists (59% vs. 38% rated risk of infection as medium/high) and were on average more concerned about their state of health.

72% of physicians and 29% of psychotherapists reported economic losses (χ^2 -Test, <0.001). Seven percent of physicians (n = 19)

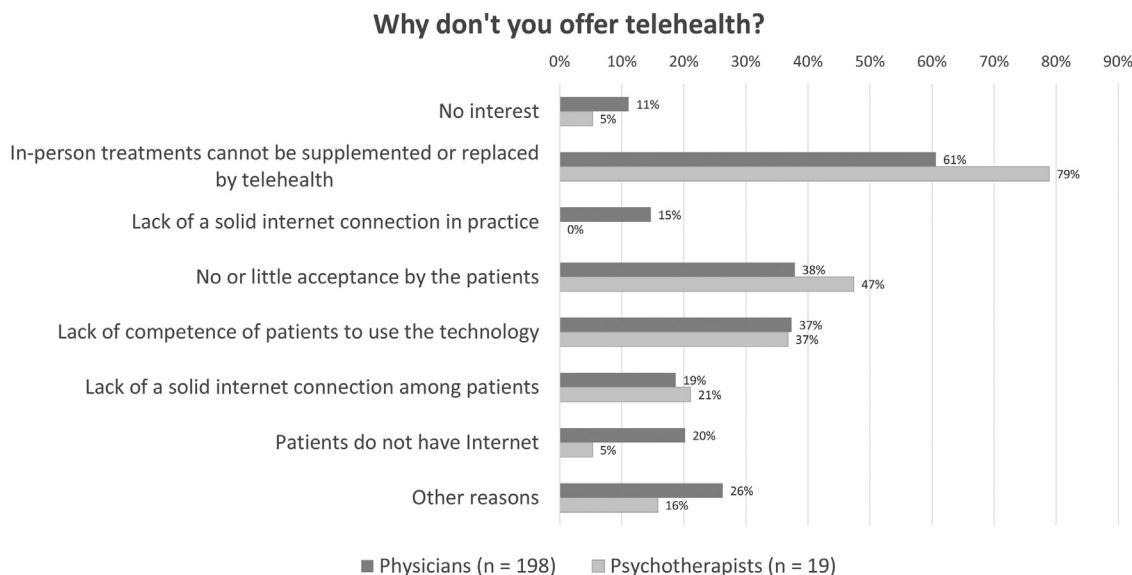


Figure 3. Reasons of physicians and psychotherapists not to use telehealth.

and 8% of psychotherapists ($n = 7$) had to temporarily close their practices due to SARS-CoV-2. Nine percent ($n = 24$) of the physicians mentioned that the existence of their medical practice is threatened by the pandemic. In the free text responses below, physicians addressed additional reasons for economic losses:

“More work, worse spatial conditions, more effort and costs with lower turnover.” (Participant 136)

“Changed (spatial) hygiene concept with higher economic effort for implementation.” (Participant 91)

The psychotherapists worry about:

“Increased demand due to changing environmental conditions, tightened economic situation as well as uncertain future perspective.” (Participant 42)

Discussion

This survey among physicians and psychotherapists in the German state of Brandenburg illustrates that the COVID-19 pandemic reduced the patient consultations in outpatient care and identifies new burdens since the pandemic. This study clarifies that clinical routines changed and led to an increased use of telehealth.

High-volume outpatient diagnosis facilities as well as treatment of COVID-19 patients in outpatient care settings is considered key to initially low COVID-19 incidence numbers in Germany [3]. This study investigates the consequences of COVID-19 pandemic on psychotherapists and physicians in outpatient practices in Germany.

The results of this survey point out significant changes in work routines of outpatient physicians and psychotherapists because of the COVID-19 pandemic, which are accompanied by tremendous burden for health care practitioners. The severity of the stressors varies between occupational groups. Thus, the patient visits decreased in almost all medical practices, whereas psychotherapy practices were less affected or were better able to compensate for the decrease through the use of telehealth. These results are in line with analyses of medical billing data: the total number of cases in April was 23% lower than in the same period of the previous year [15]. The results of our survey show that, according to the physicians, the majority of cancellations were initiated by patients. In contrast, a population-representative survey among

German citizens in August 2020 showed that, from the patients' point of view, most appointment cancellations were initiated by physicians [16]. One possible explanation for the difference is that the situation in the federal state of Brandenburg is not representative for all of Germany. A subjective misjudgement of the respondents cannot be excluded in both studies.

In the present survey, physicians mainly reported on a decrease in routine check-ups and preventive care consultations. This is also in line with the billing data analysis of the German Central Institute of Statutory Health Insurance Physicians [15]: for example, mammography screening decreased by 83% in the last week of March 2020 compared to the same period last year, and skin cancer screening decreased by 70%. According to our survey, patients most often cancelled psychotherapy sessions in psychotherapist practices. The billing analysis shows that the decline in psychotherapy sessions was highest at the end of March, but re-normalised in April. In contrast, group therapy sessions remained at a lower rate (reduction by 60%) throughout April [15].

The consequences described by physicians concerning reduced incidence rates of chronic diseases are in line with the findings of COVID-GAMS study [17]. Regarding the under-diagnosis of cancer, an increased demand in consultations in the following months is likely, or even an increased mortality because diseases have not been detected during screening examinations and an appropriate therapy could not be administered [18].

With regard to the use of telehealth, there was a clear difference between the surveyed professional groups: for example, 78% of psychotherapists have used telehealth since the beginning of the pandemic, but only 27% of physicians. Surveys and analyses of billing data from other institutions in Germany report similar results [15,19]. An increasing use of video consultations was also reported in a nationwide survey among 2,240 physicians and psychotherapists: 52% already used them and 10% planned to do so in the near future [20]. The billing analyses of video consultations are particularly impressive: while these were less than 600 in the period from March to June in 2019, more than 1.2 million video consultations were invoiced in the same period in 2020. Besides the need to reduce face-to-face contacts, these developments can be explained by special regulations, such as expanding telecare by removing billing limitations for practitioners [12].

Although telehealth services had been available and accepted by physicians and psychotherapists before COVID-19 in Germany,

IMPLICATIONS FOR PRACTICE

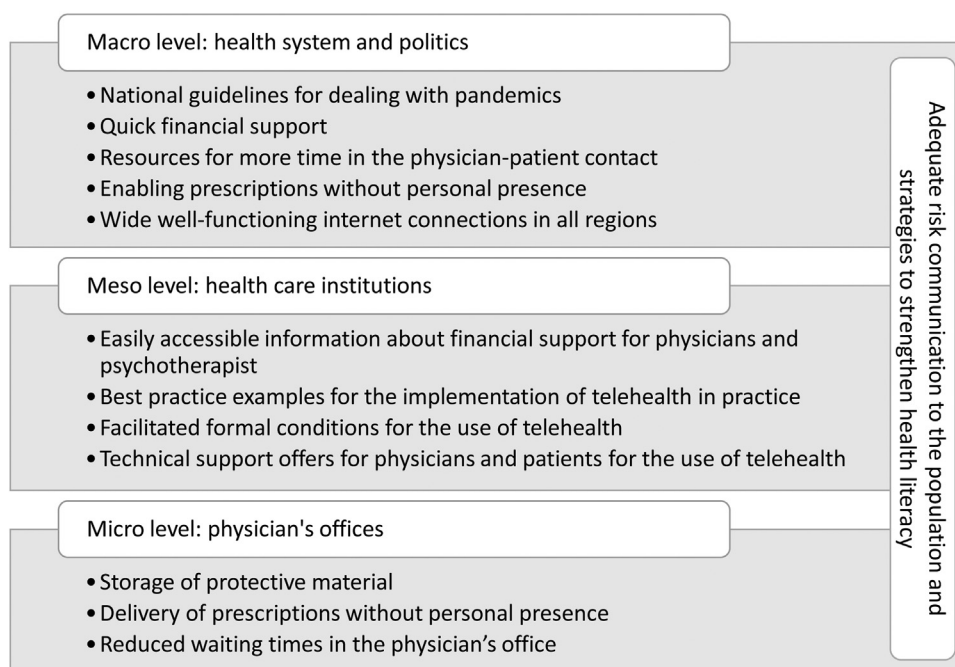


Figure 4. Implications of the COVID-19 pandemic and its consequences for outpatient health care practice.

they were rarely used [15,21,22]. COVID-19 and the need to reduce physical contacts have caused an uptake of digital health. Especially psychotherapists take advantage of those options, as they usually do not conduct clinical examinations.

Outpatient physicians and psychotherapists are currently more open to telehealth than before the pandemic, particularly to sustain patient care [23]. This can prevent underuse, especially in rural areas, e.g. for people with limited mobility [24,25]. If digital services are to be used routinely in everyday practice in the future, access should be ensured for all user groups. Digital divides must be identified to reduce barriers preventing adequate use of digital care [26].

However, some physicians still have reservations about telehealth. Since the implementation of telehealth is not fundamentally aimed at replacing personal physician-patient contact, further research projects and interventions should be dedicated to examine the effective use of telehealth in more detail and establish best practice examples. An exemplary best practice example is shown in the publication of Wahezi et al. [27]: a team of national experts has created a reference guide to describe and illustrate musculoskeletal and neurologic examination techniques that can be used effectively in telehealth. As shown in previous research in the German state of Brandenburg, the knowledge of general practitioners and specialists about the use of telehealth is limited, as 75% rated their own knowledge of telehealth as insufficient [21]. Further education and training on the use of telehealth in everyday health care should be implemented. Furthermore, the teaching of telehealth content should already be implemented into curricula of academic Human Medicine Programs, as well as into education of non-medical health care professions.

We were able to show that care pathways changed during the COVID-19 pandemic. Patients stayed away from the physician's practice, took sick certificates by phone and received prescriptions by post. At this point, it remains open whether this care practice or the future e-prescription will be implemented sustainably in everyday care. First of all, feasibility studies should be carried out

and specific guidelines for remote prescribing should be developed, which take into account the individual conditions of the patient, especially in order to ensure patient safety [28].

With this survey, we were able to demonstrate that physicians and psychotherapists have been exposed to new burdens since the COVID-19 pandemic. The economic burden, on the one hand due to the lower patient volume, and on the other hand due to the investments for hygiene protection concepts, are discussed as particularly serious. Loss of income, practice closures and dismissal of staff go hand in hand with the pandemic. That financial worries associated with the pandemic have already been described in other publications [29]. The extent to which further burdens occurred cannot be discussed conclusively at this point. Indications of diverse negative effects due to high workloads as a result of an epidemic are reported by Mulfinger et al. [30].

In summary, based on our results, practical implications for future pandemic situations can be assigned to the different levels of health care (detailed information in Figure 4.)

Strength & Limitations

These results need to be evaluated in light of strengths and limitation. Strengths include the well-defined sampling frame provided by the KVBB, including all outpatient ('ambulant') practices in the federal state of Brandenburg. Also, the survey was conducted within a few weeks after the first 'lockdown' and thus recall bias is unlikely. The response rate of 8% is a clear limitation: bias, in particular self-selection is likely. For example, the online survey format may have preferentially attracted digitally savvy professionals, which may have impacted the distribution of responses concerning telehealth. These potential biases are balanced by the fact that the study results could be validated by comparison with the Zi billing data analysis and matched with similar studies [15,17]. The outpatient care situation during COVID-19 has been monitored in a universal way, allowing derivation of recommendations (e.g. regarding the use of telehealth) from the findings.

Conclusion

Outpatient physicians and psychotherapist faced various challenges shortly after COVID-19 outbreak: reorganisation of practice management and at the same time to sustaining the provision of care. Through their spontaneous and flexible response to the COVID-19 pandemic, the outpatient providers were able to maintain their work despite high stress levels and ensure medical care in the less densely populated region of Brandenburg. Particularly in the psychotherapeutic domain, telehealth has been integrated into the care processes. Even if acute medical care could be ensured, physicians fear the consequences of suspended preventive examinations and routine check-ups. The results presented here describe the situation in summer 2020. Further research on the situation of providers at later times in the COVID-19 pandemic is needed, especially during the '2nd wave' when the incidence increased again in autumn 2020 and the restrictions were tightened.

Ethics and data protection

The study protocol was approved by the Ethics Committee of the Brandenburg Medical School on 15 May 2020 (number E-01-20200508). All quantitative research used data anonymization procedures compliant with the General Data Protection Regulation (GDPR).

Data sharing statement

All data relevant to the study are included in the article or uploaded as supplementary information. For further questions regarding the reuse of data, please contact the corresponding author.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Acknowledgement

The authors thank all participants for their valuable contributions and time.

Conflict of interest

The Authors declare that there is no conflict of interest.

CRediT author statement

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.zefq.2021.08.001](https://doi.org/10.1016/j.zefq.2021.08.001).

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